

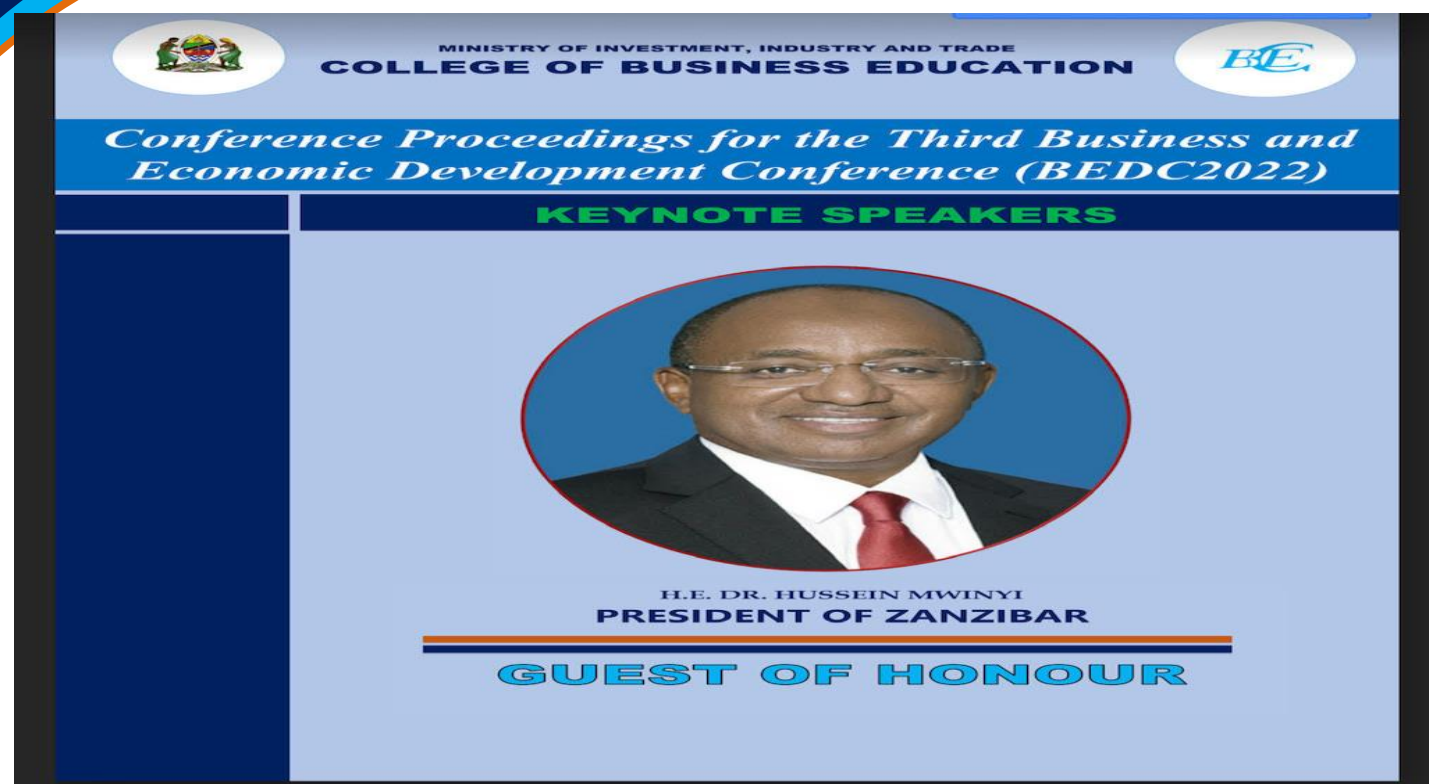


Published by
**THE COLLEGE OF BUSINESS
EDUCATION**



Conference Proceedings for the Third Business and Economic Development Conference (BEDC2022)

Held on 15th -16th November, 2022 at Jakaya Kikwete Convention Centre Dodoma, Tanzania



Third Business and Economic Development Conference (BEDC, 2022), Held on 15th - 16th November, 2022 in Dodoma, Tanzania

Conference Message

It is a great pleasure for the College of Business Education (CBE) to organize its 3rd Conference on Business and Economic Development (BEDC 2022) on 15th-16th November 2022. We are pleased to complete our conference proceedings with **One Hundred and Twenty Two** articles that aimed at resolving pressing economic problems that hinder businesses and economic development of emerging industries and markets in the world in general and Tanzania in particular.

On behalf of the College of Business Education, we thank the Honorable Dr. Hussein Ali Mwinyi; the President of Zanzibar for accepting our invitation as a guest of honour. We also thank the Five keynote speakers: Prof. Yunus D Mgaya (Former Director General – NIMR), Mr Eric Shigongo (MP), Prof Mohamed Makame (State University of Zanzibar), Dr. Ellen Otaru, Mr Unguu Sulay, Prof Ganka Nyamsogoro and CBE Alumin for accepting our invitation and deliver keynote lectures. We were indeed honoured and delighted to have them with us. We also thank the academicians who submitted and presented papers in our conference.

The theme of the conference was on ***Trade, Investment and Innovation for Economic Transformation*** which is very important in the context of today's world economy. The aspect of Trade, Investment and Innovation for Economic Transformation now or later, in one way or another, will affect everything and everyone, everyday life as well as national public finances and macroeconomic stability. Such a topic warrants particular attention from the public and private investors. The idea of Trade, Investment and Innovation is discussed in varying contexts in its narrower and wider perspectives. In particular, what we have in mind is a need to create awareness of Trade, Investment and Innovation for Economic Transformation dynamics at all levels. Trade, Investment and Innovation for Economic Transformation will become increasingly important in the future, thus addressing them becomes inevitable.

I congratulate the conference organizing team, chaired by Dr Nasibu Mramba, Dr. Petro Maziku the Secretary for organizing this conference. Sincerely, we enjoyed the conference programme.

Sincerely,
Prof. Emanuel Mjema

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Reflection of Entrepreneurship Theory in Tanzania: A Literature Review

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Abstract

This paper examines the four most used theories of entrepreneurship and their reflection on Tanzania's economy. Entrepreneurship theories have remained the more researched issue in the field of development economics. There are several theories of entrepreneurship from economic theories, psychological, sociological, and several others. The paper used a narrative design to review the empirical literature available on entrepreneurship. During the review, the economic theory of entrepreneurship has many empirical works of literature as compared to others. Other theories examined included, sociological, psychological, and innovation theories of entrepreneurship. The main results from the review are that entrepreneurship has been defined differently depending on the type of study and the use of the theory. However, other scholars define entrepreneurship depending on the economic set-up. In Tanzania, no policy has been developed specifically for entrepreneurship rather the use of small and medium enterprise policy of 2003 is used for entrepreneurship which does not fit exactly with the theories. The notion of entering into business is taken as risk-taking and looking for opportunities. In Tanzania however, the use of all theories as compared to practice has been noted. The study recommends another study to make a clear definition of entrepreneurship in Tanzania by assessing all the entrepreneurship theories.

Keywords : Entrepreneurship, economics, psychology, sociological, innovation.

Introduction

A consistent universal theory does not exist in entrepreneurship, but rather it consists of several approaches including psychology, sociology, anthropology, regional sciences, and economics. No common theoretical framework even if demanded rigorously exists to synthesize the difficult point of view in entrepreneurship (Virtaren, 1997, p. 2). The diversity of entrepreneurs and new ventures should take into account in modelling entrepreneurship. There is, therefore, no average entrepreneur and thus opportunity exploitation is more connected with doing things differently than following others (Virtaren, 1997; Ahlin, Mateja, & Hisrich, 2014).

Entrepreneurship has been defined differently depending on the economy and culture of a system. Entrepreneurship is the process of discovering new ways of combining resources for tapping opportunities (Zhang, 2015). Others see it as a process of designing, launching, and running a new business, which is often initially a small business (Shepherd, 2010). Furthermore, Sorensen and Nanda (2010) define it as the process by which either an individual or a group of individuals sees a business opportunity and decides to acquire and deploys the necessary resources required for its exploitation.

Entrepreneurship is simply seen as the capacity and willingness of an individual to develop, organize, and manage a business venture along with any of its risks to make a profit (Fernandes, 2019; Virtaren, 1997). The definitions of entrepreneurship typically focus on the launching and running of businesses. Due to the high risks involved in launching a start-up business, a significant proportion of start-up businesses have been closed due to lack of funds, poor marketing decisions, economic crisis, lack of market demand, or a combination of all of these.

Despite all the challenges, individuals and groups of people do still establish new business ventures and this has been attributed to the support to encourage people to employ themselves (Zhang, 2015). The reasons why people are becoming entrepreneurs differ among individuals and this depends on the motive of venturing into new business. Autonomy, the desire of becoming their bosses, set their own goals, control their progress, and run their businesses how they see fit are among the key reasons why people are establishing new businesses. Additionally, people of such calibre are called entrepreneurs (Sorensen & Nanda, 2010). Entrepreneurs' tapes

opportunities when the market value generated by the resource is greater than what can be generated elsewhere individually or in some other combination. From the combination of the mobilized resources, the entrepreneur makes a profit.

The road to entrepreneurship is often a treacherous one filled with unexpected results, roadblocks, and dead ends (Fernandes, 2019, p. 5). There are lots of sleepless nights, plans that don't work out, funding that doesn't come through, and customers that never materialize. An entrepreneur, therefore, is someone who organizes, manages, and assumes the risks of a business or enterprise for a benefit. They recognize that their business's success or failure rests with them, yet they don't view this responsibility as a burden but, instead, as a marker of their freedom (Fernandes, 2019; Shepherd, 2010). Most entrepreneurs have a clear vision of what they want to accomplish and feel compelled to work tirelessly to make that happen (Zhang, 2015). They genuinely believe that they have a product service that fills a void and is compelled by a single-minded commitment to that goal to keep pushing ahead. They hate stagnation and would rather fail while moving forward than get weaker in inactivity. Entrepreneurs are often looking to free themselves from these corporate constraints, find a better work-life balance, or work at times and in ways that may be unconventional.

One of the most interesting behaviours of these people is that they work hard to establish a financial safety net for themselves and their families, and at times to pass on some income and security to their heirs also to make a huge profit by creating the next big thing. Entrepreneurs by nature are often guided by the desire to create something that outlasts them (Sorensen & Nanda, 2010, p. 11). A segment of this group is led by ego and a passion for having a great life while developing a desire to create a brand that has longevity and becomes an institution. Entrepreneurs have hopes to make a lasting impression on the world and leave behind an innovation that improves people's lives in some tangible way.

Although the literature has identified the characteristics of an entrepreneur, still there is no conclusive remark regarding what constitutes entrepreneurship. Should a small-town housewife who opens her grocery business be counted the same as someone like Backrest? If not, how are these different activities classified, and where do we draw the line? (Fernandes, 2019). This uncertainty has made people come up with different terminology regarding this concept, some

have defined it to include lifestyle entrepreneur and gazelle (or “high growth”) entrepreneur. Lifestyle entrepreneurs open their businesses primarily for the nonmonetary benefits associated with being their bosses and setting their schedules (Constable, 2015). While, Gazelle entrepreneurs often move from one start-up business to another, with a well-defined growth plan and exit strategy (Constable, 2015). While this distinction seems conceptually obvious, empirically it is hard to separate them unless their motives are known.

Entrepreneurship is the dynamic process of creating incremental wealth. The wealth is created by individuals who assume the major risk in terms of equity, time, and career commitment of providing value for some product or service. The product or service may be unique but the value must somehow be infused by the entrepreneur by receiving and allocating necessary skills and resources (Virtanen, 1997, p. 8).

The objective of this paper is to describe four theories of entrepreneurship commonly used in developed economies and to address their applicability in the context of Tanzania. The theories include the economic theory of entrepreneurship, the sociological theory of entrepreneurship, the entrepreneurship innovation theory, and the psychological theory of entrepreneurship. The common entrepreneurship theories that are used in the developed economies have been selected and discussed critically showing their applicability in the context of Tanzania's environment.

Method

The study methodology is a literature review. The literature review is based on constructivism philosophy as a social constructivist which is often associated with a claim of contradictory but equally valid accounts of the same phenomenon known as multiple realities (Greene, 2006, p. 6). Moreover, literature reviews place a high value on obtaining local, contextual, and meaning-making regarding human experience (Greene, 2006, p. 7). The main questions revolved around the context guiding the literature review constructs and interpretation of underlying context into meaning for the understanding phenomenon. The constructivism method of the literature review is based on well-established principles such as an inductive and detailed description of data and reflexivity.

This paper is built on reviewing published papers concerning entrepreneurship theories. The methodology used is search engines like Google scholar using keywords entrepreneurship

theory, the theory of small business, economic theory, psychological theory, sociological theory, and innovation theory of entrepreneurship. Using search engines, 850,000 were available for access, however; only 67 published journal papers were reviewed using entrepreneurs, and entrepreneurship theories as keywords.

This paper used the narrative analysis method. Narrative analysis refers to a cluster of analytic methods for interpreting texts or visual data that have a storied form (Riessman, 1993, p. 4). A common assumption of narrative methods is that people tell stories or readings to help organize and make sense of data from reading for the purpose to explain a phenomenon (Snowde, 2010). Different approaches to narrative analysis are categorized based on whether they focus on the narrative content or structure, with the thematic version interrogating what a story is about, while the structural version asks how a story is composed to achieve particular communicative aims (Riessman, 1993; Greene, 2006; Snowde, 2010). Narrative analysis is a sort of analytical frame whereby the study interpreted published papers that are within the context of entrepreneurship (Caulfield, 2020). Scholars who conduct this type of analysis make diverse yet equally substantial and meaningful interpretations and conclusions by focusing on different elements (Caulfield, 2020). These elements of narrative analysis included, but were not limited to, how the scholarly paper was structured, what functions the paper aimed to serve, and how the data were analyzed. The focus of using the narrative analysis was to interpret different theories of entrepreneurship and the reflection in the Tanzanian context.

The main question of the study what is the interpretation of entrepreneurship in the Tanzania context? The objective of the study was to examine the different theories in entrepreneurship and how they can be reflected in the Tanzania context. The theories were analyzed textually including innovation theory, sociological theory, economic theory, and psychological theory of entrepreneurship.

Literature Review

The economic theory of Entrepreneurship

The economic theory is among the main economic theories of entrepreneurship. This theory asserts that the economy and entrepreneurship are closely linked together (Ahlin, Mateja, &

Hisrich, 2014). Entrepreneurship and economic growth can only work when the economic conditions are favourable (Baumol, 1968). As such, it is usually hard for entrepreneurs to realize growth when the economy is doing poorly. This theory further states that entrepreneurs find motivation in the presence of economic incentives. The economic incentives include industrial policy, policies of taxation, financial and resource sources, availability of infrastructure, investment opportunities, marketing opportunities, and availability of information regarding the conditions of the market and technology among others (Baumol, 1968; Anderetsch, 2007). An entrepreneur is therefore a risk-taker because one can never fully predict the favourability of the economic conditions in the future (Wim, 2009; Linden, 2015).

An economic theory of the entrepreneur is needed to explain firm success or failure, firm creation and growth, economic growth and development, and income distribution (Wandeson & Casson, 2007). The essence of a theory of the entrepreneur should be both the rationalization of success and the explanation of failure. A theory of the function of the entrepreneur will have an important role in a theory of economic dynamics, the competitive process, and trade cycles (Wandeson & Casson, 2007; Wim, 2009; Anderetsch, 2007; Linden, 2015).

Casson (2009) contains the reconstructions of economic theory that, individuals differ in taste and access to information; the entrepreneur proceeds based on the unique information available to him. Also, there are inherent difficulties (transaction costs) in organizing markets; the entrepreneur often must create market institutions. The most important concept of expansion for Casson's theory explains coordination, as a problem and a process, private or social. It is the dynamic counterpart of resource allocation (Casson, 2009).

Sociological Theory of Entrepreneurship

Sociological theory is also among the contemporary theories of entrepreneurship (Goss, 2005). It argues that the success of an entrepreneur is affected by their social culture (Ripsas, 1998; Amorosj, Borraz, & Veiga, 2016). Social entrepreneurs are more likely to achieve growth in particular social settings and build a legacy. Social aspects that affect an entrepreneur include social values, customs, taboos, religious beliefs, and other cultural activities (Reynolds, 1991; Nanda & Jesper, 2010). Social entrepreneurship starts up companies and entrepreneurs, in who they develop, fund and implement solutions to social, cultural, or environmental issues (Harper

& Hamilton, 1994; Porfirio, Carrilho, & Monico, 2016). The concept of social entrepreneurship may be applied to a wide range of organizations, which vary in size, aims, and beliefs (Li, Alhlstrom, & Bruton, 2010). Among the examples of social entrepreneurship include community Projects; a community project is a relatively small-scale effort to address an issue within a specific community, Non-profit Organizations, cooperatives (Co-op), Social enterprises, and Social Purpose businesses.

Perhaps the most rewarding advantage of being a social entrepreneur is the impact you can have on society. Social entrepreneurs create businesses in a variety of industries that can have a positive impact on society, including alternative energy, health awareness, and education (Thornton, 2007; Porfirio, Carrilho, & Monico, 2016). Perhaps the most rewarding advantage of being a social entrepreneur is the impact you can have on society. Social entrepreneurs create businesses in a variety of industries that can have a positive impact on society, including alternative energy, health awareness, the environment, and education. The characteristic of a good social entrepreneur includes creativity, self-confidence, perseverance, team spirit, and adaptability (Thornton, 2007; Porfirio, *et al.*, 2016).

Creativity involves the ability to think differently, and to find innovative solutions where others do not see any change possible is a massive quality to lead a social enterprise. To be a social entrepreneur there is a need to innovate outside the box! (Shumba, 2015; Porfirio, Carrilho, & Monico, 2016) The second characteristics are self-confidence is the act of being confident as this allows you to follow your intuition, and create solutions so many others didn't dare to try (Shumba, 2015). Socioeconomics is a key success factor for social entrepreneurs. To them, this means to impulse change (Li, Alhlstrom, & Bruton, 2010). Being self-confident is a must in difficult situations, or when other stakeholders have doubts about the feasibility of a project (Thornton, 2007; Goss, 2005). Fourth, perseverance, perseverance is a huge quality of a social entrepreneur (Fernandes, 2019). Never giving up is a key success factor for any entrepreneur, and even more when one wants to change the world. To be a social entrepreneur is to try harder than others and make a lead for others to follow (Casson, 2009; Anderetsch, 2007). This goes hand in hand with the ability of convincing others to join the movements as well as inspire others to pursue their dreams. To be a social entrepreneur is to lead the implementation of an innovative solution, and engage with a large community to change society in a sustainable way (Wim,

2009). Team spirit/solidarity is another characteristic that involves collaboration among social entrepreneurs and every stakeholder to make a social project successfully. The social entrepreneur believes that collaboration and the integration of different ideas to create solutions suitable for the needs of stakeholders. Lastly, adaptability refers to the ability of an entrepreneur to adapt to world changes and find solutions where others failed to utilize the opportunities (Pignet, 2015).

Entrepreneurship Innovation Theory

An entrepreneur does not merely conduct business to better their lives alone. Rather, through their activities, they can cause development in the economy and society at large (Mintron, 1997, p. 12). The inventor of this theory, Joseph Schumpeter, argued that an entrepreneur grows by being creative and having foresight (Goss, 2005; Lusch & Nambisan, 2015; Hagedoorn, 1993; Swezy, 1943). One of the creative things that an entrepreneur does is introduce a new product (Troy, Kroff, & Szymaniski, 2007). A new product often comes to solve a certain problem in society or make it more convenient. Another innovative aspect is that in a bid to achieve growth and have more profits, an entrepreneur introduces a new production method (Liu, Jiangyoung, Travor, & Mike, 2010). Notably, enhanced production methods lead to a reduction in the cost of production and an increase in the goods manufactured.

Innovation also comes in when an entrepreneur opens a new market (Troy, Kroff, & Szymaniski, 2007). Innovation is often done after the identification of a growth opportunity or a void in the economy. The discovery of new sources of raw materials and the establishment of organizations are also aspects of entrepreneurs being innovators (Lusch, Zacharia, & Nix, 2011; Marvel & Lumpkin, 2007). Innovative entrepreneurship doesn't always mean creating something new: innovators often take something that already exists, improve it, change it, make it better and make it the best for their customers (Lusch, Zacharia, & Nix, 2011; Ahlin, Mateja, & Hisrich, 2014). Innovative ideas are what will make a start-up competitive (Troy, Kroff, & Szymaniski, 2007; Nausmann, 1996). Innovations create bigger opportunities and are critical for the survival, economic growth, and success of a company. Innovation increases the chances to react to changes and discover new opportunities. It can also help foster a competitive advantage as it allows for building better products and services for the customers (Lusch, Zacharia, & Nix,

2011). It is important to take note that, entrepreneurs are risk-takers, individuals who seek to push the boundaries of conventional practice wisdom. The ideas of entrepreneurs from initial strategic temperate for new ventures, products, and processes to satisfy human wants. The known activities of entrepreneurs guide the creation of jobs, and accessibility of commodities; therefore improving economic development.

The psychological Theory of Entrepreneurship

Psychological theories of entrepreneurship focus on the individual and the mental or emotional elements that drive the entrepreneurial of individuals (Hajirnis, 2013). A theory put forward by psychologist McClelland, a Harvard emeritus professor, offers that entrepreneurs possess a need for achievement that drives their activity in 1967 (Baum, Frese, & Baron, 2014). This psychological motivational theory states that the needs for achievement, power, and affiliation significantly influence the behaviour of an individual, which is useful to understand from a managerial context. The psychological theory concerning entrepreneurs' experiences growth when society has several individuals with the necessary psychological characteristics (Carsrud & Johnson, 1989; Hajirnis, 2013). These characteristics include having a vision, being able to face opposition, and having the need to achieve highly (Gielnik & Frese, 2014). A person can only possess these traits during their upbringing when they excel when they are self-reliant, and when there is low father dominance.

Psychological theories of entrepreneurship emphasized the emotional and mental aspects of the individuals that drive their entrepreneurial activities (Simpeh, 2014). McClelland's theory explains the need for achievement that often regulates the actions of an entrepreneur. McClelland's Human Motivation Theory states that every person has one of three main driving motivators: the need for achievement, affiliation, or power (Khurana & Joshi, 2017). These motivators are not inherent; are developing culture and life experiences. Achievers like to solve problems and achieve goals. Entrepreneurs are classified based on their need for achievement which is the driving factor for their economic growth (Khurana & Joshi, 2017; Carsrud & Johnson, 1989). According to McClelland, an entrepreneur works in a structured and creative way which eventually leads to better decision-making in predicaments. Individuals possess three

dominant motivators irrespective of their age, gender, or culture. These three motivators are directly proportional to life experiences and culture experienced by individuals (Khurana & Joshi, 2017).

The level of analysis in psychological theories is the individual (Carsrud & Johnson, 1989, p. 9). These theories emphasize the personal characteristics that define entrepreneurship. Personality traits need for achievement and locus of control are reviewed and empirical evidence is presented for three other new characteristics that are associated with entrepreneurial inclination. These are risk-taking, innovativeness, and tolerance for ambiguity (Ahlin, Mateja, & Hisrich, 2014). Understanding entrepreneurship from the psychological perspective helps to determine whether society has a healthy supply of individuals possessing entrepreneurial characteristics. It also helps develop the overall concept of entrepreneurship which is dynamic and changes as per the market conditions.

Results

The finding of the literature review does not present an original argument (GSU, 2021). Rather literature review studies offer an overview of what is known about the topic and evaluate the strength of the evidence on the reflection of entrepreneurship in Tanzania. This finding is a synthesis of the key arguments in the theories of entrepreneurship. This study helps distinguish what theories say and what has been interpreted and identifies what needs further research.

This study found 71 empirical papers related to the theory of entrepreneurship. The theories are major in sectors of business, production, and service industries. The finding further noted that the most used theory is the Economic theory of entrepreneurship followed by the sociological theory of entrepreneurship. The study also found entrepreneurship has several theories. The entrepreneurship theories include.

Economic Theory of Entrepreneurship

The economic theory of entrepreneurship is one which is widely researched. The theory has several propounded by experts in entrepreneurship. Schumpeter propounded the theory of innovation; Leibenstein propounded the X-efficient theory; Kirzner propounded the theory of

adjustment; McClelland propounded the achievement motivation theory; Knight propounded the theory of profit, and Hayek propounded the theory of market equilibrium.

Sociological Theory of Entrepreneurship

The sociological theory of entrepreneurship has ranked second in research about the development and management of entrepreneurship. The main more profound scholars of the sociological theory on entrepreneurship theory included; Max Weber more profound religious belief theory; Thomas Cochran propounded the theory of Entrepreneurial supply; Hagen propounded the theory of social change, and Young propounded the theory of group level patterns.

Psychological Theory of Entrepreneurship

The development of entrepreneurship has the belief that develops from the psychological perspective of individuals (Baum, Frese, & Baron, 2014; Turkina & Thai, 2013; Frese, 2009). The psychological theories centre on the psychological characteristics of the individual. It is found that psychology influences supply and demand hence entrepreneurial behaviour develops. The propounders of the psychological theory include Schumpeter who propounded innovation while Carland propounded the organisation building for innovative entrepreneurs. Bygrave and Hoffer propounded the theory of the human aspect of psychology and entrepreneurship management. John Hunkel propounded the theory of entrepreneurship supply. It is found that entrepreneurship supply theory determinants include; demand structure, labour structure and opportunity structure. The study found that the psychological theory considers non-economic factors that provide inputs to guarantee the success of entrepreneurship.

Specialists in entrepreneurship

The study found the main scholars of the entrepreneurship theories from production to service sector include Walker who defined entrepreneurship as individuals being agent's production which is the first factor for entrepreneurship development; Harbison propounded the development of entrepreneurship in the relationship of entrepreneurship as the factor of

economic development. It is found that Hardison also categorized the functions of modern entrepreneurship and steps for entrepreneurship development. The study found that Peter Drucker is a specialist in innovation and opportunity exploitation. Drucker propounded the function of entrepreneurs as to search for change and respond by exploitation of opportunity, two factors for change included innovation and resource management leading to entrepreneurship. The study also found that, Peter Kilby another scholar in entrepreneurship. Kilby is a famous author on economic development and entrepreneurship. Kilby propounded the important activities for entrepreneurship success including; exchange relationships; political administration and technological use for the production and exchange process.

Entrepreneurship Models

This study also found that there are two models that closely contribute to the theories of entrepreneurship. The models are a conceptual model of entrepreneurship by John Kao, and an Integrated model of entrepreneurship developed by Abdul Mahmud (Mohanty, 2012). The discussion of the study is based on four theories namely, economic theory, sociological theory, psychological theory, and innovative theories.

Discussion

The study has reviewed four theories that are more researched in entrepreneurship management. Each theory used in entrepreneurship has its strengths and weaknesses. The discussion looks at these strengths and weaknesses in each theory in relation to entrepreneurship theory application in Tanzania.

Economic theory

The strengths of the economic theory among others are the concentration on individual incentives for serving society. The economic theory emphasises the capitalization of the business environment as resources for business development and opportunity exploitation. The main base of economic theory is the use of available resources as an opportunity. The resources include human capital, financial resources, and physical resources. The main challenge with the economic resource theory is based on economic information that has been generated by others maybe for other purposes. The use of the information can mislead the real available

opportunities. Basing on unique information can distort the meaning of entrepreneurship. When the information is not sufficiently analyzed the opportunity is not seen.

Sociological theory

The sociological theory of entrepreneurship emphasizes the effect of social culture setting on the advancement of entrepreneurship. The social culture which is likely to affect entrepreneurship includes shared values, customs, and religious beliefs. Social culture setting is where one can enjoy several opportunities around the world. The strengths of the theory are that it can consider the social culture as important to establish and develop entrepreneurship. The sociological part of business undertaking also notices the importance of social networks as the necessity for entrepreneurship. Only entrepreneurs have to be creative thinkers to solve problems.

The weakness of the theory is much emphasis on creative thinking to improve offerings and collaboration; therefore it does not think the economic setup is important for development. The theory also does not consider the environment as a source of opportunity exploitation. The consideration of the social environment allows for changing with the business environment changes.

Innovation Entrepreneurship Theory

Innovation entrepreneurship theory is widely researched as the world's technological development makes the demand for different products for consumption. The theory assumes creativity and innovation are the foresight of business development. Societies have several challenges that need to be solved by entrepreneurs. Innovation theory emphasizes research and development as the basis for the increasing demand for products and services as the research is done on challenges facing society. The theory assumes by research the costs of the products can be reduced and hence have an advantage to users.

The challenge/weakness of the theory is its emphasis on creativity as the only way to solve society's problems using research and development. Creative thinking and creativity need to go

hand in hand with other variables like environment, culture, and customer tests with their references.

Psychological Theory of Entrepreneurship

The theory has been much researched by psychologists on the entrepreneur's development. The psychological theory assumption basis on individual achievement. The main concentration of the psychological theory is the interest and experience of the individual as an emotional element that drives entrepreneurship development and growth. The theory also assumes that an individual with focus or visionary strategy prospers requiring achievement to a higher level. The theory is based on three elements for entrepreneurs' growth, personal traits, locus of control, and need for achievement. The elements are important when considering entrepreneurship development and growth.

The psychological theory of entrepreneurship elements dictates the individuals to risk-taking as an individual has resources motivates to establish entrepreneurship. The theory looks at tolerance as one of the factors for entrepreneurship to prosper. The theory also recognizes the wealth of individuals who can risk venturing into the development of goods and services for community consumption. The main weakness of the theory is its consideration of the individual's motive of risk-taking to establish business ventures as the main source of entrepreneurship. The combination of an individual having human, financial, and capital ability have to be linked with the environment and incorporate economic, sociological, and innovation towards entrepreneurship development.

The discussion above concludes that entrepreneurship in Tanzania can fit into all four reviewed theories. The definition of entrepreneurship is a risk-taker, innovator, individual initiator, and using personal resources to develop ventures for supply and fill gaps of demand. In Tanzania, several definitions have been defined using the theory of psychological and social theories but have not been tested. A good example is the definition of someone doing business is termed as an entrepreneur; however, doing business itself is not entrepreneurship as per theories. Also,

entrepreneurship in Tanzania has no policy to guide its operation rather than using the Small and Medium Enterprises policy.

Conclusion and Recommendation

Conclusion

The study was about the reflection of entrepreneurship theories in Tanzania. The main objective of this study was to examine the applicability of entrepreneurship theories in the Tanzania context. Many studies have been done globally concerning entrepreneurship theories. Each theory has a different definition and different variables that have empirical tests on its applicability. The study has revealed that the four entrepreneurship theories reviewed are not well articulated in Tanzania to define entrepreneurship. The reviewed theories can be well used in the Tanzanian context to dictate the development of entrepreneurship as is known the importance of entrepreneurship in the economic development of a nation. The basis of any development depends on a strong base of entrepreneurship.

Recommendation

The study suggests that a statistical study be done to establish which theory is fit for developing countries to define entrepreneurship theory fit for application. The study should include several countries to establish a true definition of entrepreneurship in developing countries. The study is limited to four theories which are the economic theory, sociological theory, innovation theory, and psychological theories. The field of entrepreneurship has so many theories being researched; this paper suggested another paper to explore more and combine these theories to come up with only a theory relevant to Tanzania.

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Exploring Performance Determinants for Women-Owned Small and Medium Enterprises in Mwanza, Tanzania.

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Abstract

Women entrepreneurs are essential to the economy's growth of any nation. However, several aspects that influence how well women entrepreneurs perform vary from culture to culture. The goal of the current study is to identify and investigate the variables that significantly affect how well women entrepreneurs perform and succeed in SMEs. Data is gathered from 160 female entrepreneurs utilizing survey questionnaires, with an average response rate of 83%. SPSS21 software was used for data analysis. Results indicate that Startup capital, services sector, and access to loans are the main factors determining WOE's performance particularly the number of employees. Also, women mobility, networking, and access to loans determine WOE performance significantly with regard to change in annual sales turnover, and networking and startup capital determine WOE's performance by the amount of capital owned by the women owned SMEs. The current study will assist female entrepreneurs in obtaining understanding of the elements that could impact their performance. By reducing their financial and social barriers,

the government may be able to boost the number of female entrepreneurs and encourage them to contribute to the economy's sustainable growth.

Introduction

Small and Medium Enterprises (SMEs) play a crucial role not only in employment creation and income generation, but they also stimulate growth in both urban and rural Tanzania. MSMEs in Tanzania generate 27% of the country's GDP and employ more than 5.2 million people (FSDT, 2021). Women represent almost half of the total population of Tanzania (CENSUS, 2022). The proportion of women owned enterprises (WOEs) is reported to have increased drastically (Isaga, 2019). Women are demonstrating a substantial contribution to the economy. This helps women entrepreneurs grow their economies while also having a positive social impact on both the women themselves and their communities.

Although women entrepreneurs have been acknowledged as a key driver of economic development in SSA (Kapinga and Montero, 2017), research into the factors that prevent women enterprises from high performance and sustainability of their businesses in Tanzania's rural areas is still lacking. According to the Tanzania Development Vision (TDV) 2025 and other government programs, agriculture has been highlighted as a major source of employment and means of subsistence in the country's rural areas and as a priority sector for strategic intervention (Kapinga and Montero, 2017). In Tanzania, women comprise a majority of the labour force in agriculture industry (54%) of which in the rural areas women participation in the agricultural activities is 81% (Leavens, 2019). The fact that there are many businesses run by women suggests that women are engaged in the economy. But the performance of such businesses is an intriguing topic. It was therefore the centerpiece of this paper to examine factors that influence performance of WOE in Mwanza.

Despite what they contribute, some women owned SMEs in Tanzania struggle, and some of them fail and close. Some of the issues that afflict them are brought on by low technology, strict laws, high borrowing interest rates, and capital limits (Nkwabi & Mboya, 2019). According to Maziku, Majenga, and Mashenene (2014), ethnicity, lack of support from society, and women's immobility all had a detrimental impact on the success of women-owned small businesses. Mashenene, Macha, and Donge (2014) also demonstrated the significant influence of social

factors, beliefs, norms, and perceptions on SMEs. Majenga and Mashenene (2015); Maziku et al. 2014 also explored the social cultural difficulties that Tanzanian women business owners face and found a link between socio-cultural factors (SCF), such as interference and lack of support from husbands, and the poor financial performance (FP) of women-owned small- and medium-sized businesses in Tanzania. The lack of market access, unequal social responsibility, and a lack of funding are other issues that women entrepreneurs in must deal with, according to Kapinga, 2017. However, the majority of their research focused on female entrepreneurs in Iringa's rural and Dodoma's and Dar es Salaam urban areas. In contrast to prior studies (such as Majenga and Mashenene (2015) and Kapinga and Montero (2017)) our study focuses on the difficulties faced by female entrepreneurs working in the production and service sectors in Mwanza. Moreover, this paper uses a Logistic and Ordinary Least Regression Models to see how the range of selected factors influences performance in WOE's in terms of number of employees, increase in sales volume and current capital owned.

Literature Review

Women Entrepreneurs – The Tanzanian Context

Mori, (2014) shows that 83 percent of women entrepreneurs are sole proprietors, 12 percent are in partnership and 5 percent are limited liability companies. Generally, Tanzania is consistently creating and implementing laws, policies, programmes, projects, networks and organizations aimed to support women entrepreneurs. Consequently, women entrepreneurs are as important as their male counterparts in wealth creation and the development of society.

Performance in SMEs

Performance refers to the overall activities and operations performed by women entrepreneurs in SMEs in strengthening their enterprises (Wube, 2010). Measures of performance include: turnover, profitability, cost of sales, asset value, number of customers, price of products/services, costs of inputs, number of employees, stock used, equipment used and loss (URT, 2012).

Factors Affecting Performance of WOE's

Women owned businesses just like any other businesses face several hindrances to performance. Although their magnitude and influence vary, such factors influence performance differently to different entrepreneurs.

Empirical Literature Review

S/no	Title	Authors	Major findings
1.	Business Constraints and the Potential Growth of Small and Medium Enterprises in Tanzania: A Review	(Mashenene & Rumanyika, 2014)	Capital constraints, a lack of business training, and a culture that discourages entrepreneurship
2.	A Review of Factors Affecting the Growth of Small and Medium Enterprises (SMEs) in Tanzania	(Nkwabi & Mboya, 2019)	Financial constraints, capital constraints, poor technology and tight regulation
3.	Social-Economic Constraints towards Women Business Growth in Tanzania	Nyangarika, (2019)	Access to information
4.	Factors influencing women entrepreneurs' performance in SMEs	Hasan & Almubarak., (2016).	Lack of access to financial resources, difficulty in finding qualified labors, work-home conflict and low profit, entrepreneurial goals and motivations, legal factors and opportunity recognition
5.	Investigating entrepreneurial success factors of women-owned SMEs in UAE	Gupta et al., 2018	Personal, environmental factors and government support affect positively and significantly to the success of women-owned SMEs in UAE
6.	Factors affecting the performance of women entrepreneurs in SMEs: A case study of Punjab, Pakistan	Ali et al., (2019)	No professional training, low initial capital for enterprises, lack of collaterals and rigorous procedures for availing financial services from concerned institutions

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7.	Determinants that influence the performance of women entrepreneurs in micro and small enterprises in Ethiopia	Alene., T (2020)	Entrepreneurship training, lack of supporting institutions, marital status (divorced and widowed and enterprise's license
8.	Factors affecting women entrepreneurs' success: a study of small-and medium-sized enterprises in emerging market of Pakistan	Salamzadeh et al., (2021)	Political, economic, access to finance and environmental factors
9.	Factors influencing women entrepreneurs' business success in Somalia	Guled & Kaplan., (2018)	Financial capital, fund support, socio economic influence, market & networking
10.	Determinants of the business performance of women entrepreneurs in the developing world context	Hagelaar et al., (2020).	Entrepreneurial attitude that is both innovative and risk-taking, as well as business training, all have a good impact on performance, while social relationships have a negative impact.
11.	Impact of training on the performance of women entrepreneurs in Kenya	Ajuna et al., (2018)	Business training
12.	The performance of women entrepreneurs: Human and financial capital	Abiodun & Amos., (2018)	Human capital and financial capital
13	An empirical analysis of the impact of family moral support on Turkish women entrepreneurs	Welsh & Kaciak., (2016)	Family moral support
14	An assessment of the factors affecting performance of women	Rahman, M. A. (2016).	Starter capital, access to capital market, collateral financing, theoretical knowledge

	entrepreneurs in SMEs of Bangladesh		and education, prior experiences, and organizational supports

Conceptual Framework and

Based on the literature review, several factors that affect success of WOE are identified. The dependent variable for this study, Performance, was measured in three ways: (1) change in annual sales turnover, (2) change in number of employees and (3) current capital status, while the independent variables include: business training, family roles contradicting business activities, mobility, start-up capital, access to capital, access to information, networking and the business sector.

Research Methodology

The dependent variables were transformed into a dummy (1= for increase in annual sales turnover, an indication of good performance of a WOE, and 0 = for decrease and/or unchanged annual sales turnover, an indication of poor performance). Also, for the case of change in number of employees the dependent variable was transformed into dummy (1= for increase in number of employees, an indication of good performance, and 0 = for constant or decrease in number of employees, indicating poor performance). In addition to that we measured performance of women owned enterprises by looking at the amount of capital owned by a WOE.

A multivariate analysis was conducted to analyze their effects. With binary and continuous data a Binary Logistic Regression Model (BLRM) was used to analyze the relationship between the performance factors and performance. BLRM was used because it uses multiple regressions to analyze variance of dependent variables by several fixed independent variables (Felicia et al., 2013) and in addition, the BLRM employs the principle of linear combinations where association among several variables is considered and yields unbiased and efficient estimates of beta coefficients, which is not possible with the use of ordinary least square regression analysis (Fabowale et al., 1995; Tundui, 2012).

Consequently, the empirical BLRM models for the dependent variables: change in annual sales turnover and change in number of employees were specified in the following equations:

$$L_s = \ln \left(\frac{P^i}{1 - P^i} \right) = \beta_0 + \beta_1 X_1 + \dots + \beta_{16} X_{16} + \varepsilon_i \dots \dots \dots (1)$$

for change in annual sales turnover, and

$$L_e = \ln \left(\frac{P^i}{1 - P^i} \right) = \beta_0 + \beta_1 X_1 + \dots + \beta_{16} X_{16} + \varepsilon_i \dots \dots \dots (2)$$

for change in number of employees.

The capital status of the WOE's was regressed against the influencing factors by using a multiple regression model to test the significance of the independent variables on the dependent variable. The multiple linear regression model used is as follows:

$$C = \beta_0 + \beta_1 X_1 + \dots + \beta_{16} X_{16} + \varepsilon_i \dots \dots \dots (3)$$

Where:

L_s , L_e and C - Measure women enterprise performance in terms of change in annual sales turnover, change in number of employees and capital status respectively.

β_0 is a constant term; $\beta_1, \beta_2, \dots, \beta_{16}$ are the coefficients of X 's measuring the probability likelihood of success of women business, $X_1, X_2, \dots, X_{16}$ are the independent variables and ε_i is error term.

Data was collected through structured questionnaires and analysed through SPSS software. The study employed purposive sampling technique to identify women participants in entrepreneurship basing on the following criteria: a) working in the production and service industry in Ilemela municipal, b) having more than two years of business experience as an entrepreneur. With the aid of purposeful sampling, the researchers were able to select pertinent respondents in order to respond to the study's research questions (see Bryman 2012). Participants were recruited through village elders, church leaders and direct interactions on the areas where the female entrepreneurs were selling their goods and services. Through this recruitment procedure, one hundred sixty (160) participants consented to take part in this study.

Findings and Discussion

Since the interest of the paper was to determine the factors that influence WOE's performance, the quantitative findings are of paramount importance. In this section therefore, we present the Logit and Ordinary Linear Square regression results.

Before all regressions, a correlation analysis was run to take care of multicollinearity. This is because if there is severe multicollinearity the standard errors for coefficients tend to be very large (inflated), and sometimes the estimated Logit and Ordinary Linear Squares (OLS) model coefficients can be highly unreliable. With perfect multicollinearity it is impossible to obtain unique estimates of regression coefficients with all the independent variables in our model.

The rule of thumb is that, a correlation of 0.8 or higher is indicative of multicollinearity (Gujarati, 2004). Results on Appendix 1 show that there is no severe multicollinearity in our chosen variables, and therefore the regressions are valid and meaningful.

Determinants of Performance of Women owned SMEs

All coefficients except the constant term in the model of null hypothesis that are simultaneously equal to zero were tested using the Likelihood Ratio. The calculated likelihood ratio chi-square is 42.58 and 52.40 for logit models and F-statistics of 3.91 for OLS model leading to the rejection of the null hypothesis at 5 percent and 1 percent probability levels with 26 degrees of freedom for logit models and at 1 percent for OLS model. This affirms that the model is capable of explaining the factors that contribute to women owned SMEs. This is the goodness of fit for our model and in this case our model fits well with our data.

Table 1: Logit and OLS Regression Results

Variable	LOGIT		OLS
	Number of employees	Annual sales turnover	Amount of capital
Family_contradicting_role	0.42674(1.01)	-0.11104(-0.24)	-2564584(-1.14)
business training	0.69388(1.62)	-0.23275(-0.50)	-4126109(-1.71)
women mobility	0.47136(1.10)	1.24552(2.52)**	3070584 (1.32)

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Networking	-0.26621(-0.48)	-1.13150(-1.96)	6372283(2.20)**
access_information	0.55645(0.75)	0.66284 (0.85)	-2756140(-0.72)
lnstartup_capital	0.46107(2.65)***	-0.17801(-1.06)	1894622(2.19)**
Business sector			
Production	0.97373(1.21)	0.29183(0.35)	-956989(-0.22)
Services	1.70145(3.23)***	-0.07327(-0.14)	-2330427(-0.89)
Access to loan	0.84461(1.99)**	1.24906 (2.58)***	2009063(0.86)
_cons	-9.12956(-3.48)***	0.78308 (0.32)	-30398858(-2.75)**
Number of obs	160	160	160
LR chi2(26)	42.58	52.40	F(26, 133) = 3.91
Prob > chi2	0.0214	0.0016	Prob > F = 0.0000
Log likelihood	0.1921	0.2515	R-squared = 0.4333
Pseudo R2	-89.56137	-77.99469	Adj R-squared = 0.3225
			Root MSE = 1.2e+07

¹ The number in parentheses are z-statistics for Logit model and t-statistics for OLS.

² legend: * p<0.10; ** p<0.05; and *** p<0.01

From the results, it is shown that startup capital, services (business sector), and access to loans are the main factors determining WOE's performance, change in number of employees, in particular. Also, women mobility, networking, and access to loans determine WOE performance significantly with regard to change in annual sales turnover, and networking and startup capital determine WOE's performance by the amount of capital owned by the women owned SMEs.

Startup Capital

As it was anticipated, success of WOE is significantly related to startup capital at 1 percent level of significance for change in number of employees and at 5 percent for amount of capital owned by SMEs. The positive sign indicates that the bigger the initial capital the more likely is the increase in number of employees and amount of capital owned in women owned SMEs. This means that the amount of startup capital is very fundamental for both increase in number of employees and expansion in capital. This aligns with Nkwabi & Mboya, (2019); Abiodun & Amos, (2018).

Business Sector

Evidence from the sample shows that business sectors differ in performance, and the service sector has influence on increase in number of employees by 1.7 more compared to trade sector at 1 percent level of significance. The nature of business may call for more hands while others may call for few hands. Services in particular are labor intensive while others, for example, ICT oriented could need more facilities than employees.

Access to Loan

Access to loan affects significantly positively the performance of women owned SMEs, both in terms of change in number of employees by 0.84 at 5 percent significance level, and increase in annual sales turnover by 1.24 at 1 percent significance level. This means that access to loans helps SMEs in expanding their businesses and hence results in more annual sales turnover, which could lead to employing more people. Further, although access to loans does not significantly influence the increase in amount of capital owned by SMEs, it however results in positive sign meaning that SMEs are capable of expanding and therefore resulting in increase in capital they own. These results are consistent with others, for example, Guled & Kaplan., (2018); Salamzadeh et al., (2021) who also found a positive relationship between access to loans and SMEs performance.

Women Mobility

Women mobility has positive influence on change in annual sales turnover at 5 percent level of confidence by 1.2 increase in annual sales turnover. As was expected, women who are mobile and visit different places learn from other peoples' experiences in related businesses in areas of

access to markets for products/services, sources of capital and promotion of self-confidence. This promotes the likelihood of increasing their annual sales turnover as reflected by previous studies, for example, Guled & Kaplan., (2018) and Tundui (2012).

Networking and Access to information

Networking significantly increases the amount of capital owned at 5 percent significance level. Networking increases women awareness about business, information, source of capital, which if utilized well have positive influence on the amount of capital owned. This is similar to results by Welsh & Kaciak., (2016); Guled & Kaplan., (2018) who found a positive relationship between SMEs success and moral support respectively. Nonetheless, contradicts Hagelaar et al., (2020) who found that social ties had negative impact to SME performance.

Insignificant Variables

Variables such business training and access to information had statistically insignificant influence on change in number of employees, change in sales turnover and amount of capital owned by SMEs. These contradicts studies such as Nyangarika, (2019) who found that access to information had significant impact. Additionally, Mashenene & Rumanyika, (2014); Ajuna et al., (2018); Hagelaar et al., (2020) found that business trainings had significant impact.. While business training is important for improving enterprise performance, it is interesting to note here that the variable contributes negatively to both capital owned and annual sales turnover, but positively to number of employees, although in all cases quite insignificantly. The implication here is that women entrepreneurs who got training did not get appropriate training. Appropriate training will always contribute positively to business performance. This being the case, the training they got just spent their resources in terms of time and money and therefore ended in insignificant negative contribution to capital and sales volume. Otherwise it did not affect number of employees.

Moreover, family contradicting roles show negative contribution to annual sales turnover and amount of capital but positive contribution to number of employees. This means that such contradicting family roles could be, for example, school fees for offspring, medical care for family members and the like. This may not affect the number of employees unless it persists.

Otherwise, it will just affect sales turnover and amount of capital owned since the roles will need cash to be solved. Such cash may result in reduced business capital and probably reduced merchandise for selling, which will result in reducing sales and capital owned.

Conclusion and Recommendation

The study aimed to find out factors that influence the performance of women owned SMEs. It used quantitative method because most of the studies on women SMEs performance use qualitative and hence difficult to establish with confidence variables that influence their performance.

It was found that several factors influence women SMEs performance significantly. Startup capital, services (business sector), and access to loans are the main factors determining WOE performance, change in number of employees, in particular. Also, women mobility, networking, and access to loans determine WOE performance significantly with regard to change in annual sales turnover, and networking and startup capital determine WOE performance by the amount of capital owned by the women owned SMEs. Lastly on challenges that SMEs owner face includes problem in obtaining finance, problem of getting enough customers, family roles and high taxes charged on their businesses.

Based on the findings above it is clear that there is a need for policies to be enacted to enable women SMEs to perform better. Policies enacted should be in favor of factors which makes women perform better. This includes; It has been clearly shown that access to loan has a significant positive relationship to success of SMEs (i.e increase in number of employees and sales turnover). More policies in favor of access to loan which are affordable will enable WOE to have enough capital to expand more their business and hence success of their SMEs. With this loan given to women should be charged low interest rate and reduce other requirement which makes access to loan a problem to them.

Limitations of the Study and Recommendations for Further Research

Also, the same study on the factors that influences success of WOE in Tanzania should be carried out including larger sample size drawn from other regions for generalization as in the current study samples were drawn from one region something which is regarded as the limitation of the study.

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Appendix 1: Correlation Analysis of Variables

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.00									
X2	(0.15)	1.00								
X3	0.24	(0.04)	1.00							
X4	0.07	0.17	0.09	1.00						
X5	(0.08)	(0.06)	(0.01)	0.15	1.00					

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X6	(0.01)	(0.02)	0.04	0.09	0.05	1.00				
X7	0.43	0.00	0.01	0.20	(0.02)	0.22	1.00			
X8	0.07	0.02	0.02	(0.26)	(0.13)	(0.32)	(0.31)	1.00		
X9	0.37	(0.06)	0.23	0.23	0.05	0.18	0.52	(0.22)	1.00	
X10	0.09	0.12	0.26	0.13	0.07	(0.08)	0.14	(0.08)	0.09	1.00

, X1 =Level of education of the SME owner,

X2 =Family_contradicting_role,X3 =business_training, X4 =women_mobility, X5 =networking,

X6 =access_information, X7 =lnstartup_capital, X8= Business sector, X9 =Business plan and

X10 =Access to loan.

The Attainment of the Blue Economy in Tanzania: Opportunities and Gaps to Bridge

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Abstract

Tanzania, like many other nations, has oceans, lakes and rivers that need effective and efficient exploitation of the marine resources to attain a blue economy. However, opportunities in marine resources that could realize the attainment of the blue economy in Tanzania continued unidentified due to the inadequate research in the area. Consequently, this study investigated possible opportunities in marine resources and gaps that need to be bridged to attain a blue economy. This study used systematic literature review and employed content analysis for both theoretical and empirical literature to achieve its objectives. Thus, standard search protocols were adhered to and search terms retrieved a total of 587 related articles, of which ten (10) eligible articles were finally selected for comprehensive analysis following inclusion/exclusion and quality assessment criteria. The study found opportunities in seaweed, mariculture, fish, oil and gas, coral reef, and mangrove. However, gaps to bridge were low capacity, financial constrain, inadequate research, unawareness and empowerment. Hereafter, the study recommends to the government to establish capacity building, awareness campaign, empowerment and access to credit. Furthermore, rigorous research to expose unknown marine resources to be efficiently exploited to attain blue economy is suggested.

Keywords: Marine resources, opportunities, blue economy, fishing, seaweed, mariculture, coral reef, mangrove

Introduction

Blue economy (BE) is an attempt to create activities related to the exploitation of water body resources to generate comprehensive and progressive economic health without violating the goals of sustainable environmental development (Spalding, 2016). BE deviate human activities

from destructive extraction-focused business sectors that deplete marine resources (MR), damage the economy, and risking of future life. Instead, BE is balancing the social-economic activities of utilizing the MR for livelihood and sustainable environmental development. However, Zhong (2019) describes “MR as those substances, energy and marine space existing in the marine environment that can be exploited and utilized by people, including marine biological resources, seawater resources, seabed mineral resources, marine renewable energy, and marine space resources.” Therefore, BE is a sustainable ocean economy in which economic wealth is balanced with the health of ocean ecosystems and their natural assets (Lee, Noh, & Khim, 2020; Patil et al. 2018). Roughly, 71% of the Earth's surface is covered with water that also exists in the air as water vapor, in rivers and lakes, in icecaps and glaciers, in the ground as soil moisture and in aquifers, and even in all living organisms (Water Science School [WSS], 2019). Furthermore, water bodies encompass resources that support welfare by offering water itself, oxygen, absorbing carbon dioxide, recycling the nutrients and regulating global climate and temperature. Accordingly, an enormous proportion of world food and livelihoods have their origin in water bodies. In this background, the BE is valuable in nature and clearly a true source of livelihood development in the world. Therefore, Tanzania is endowed with plentiful water body natural resources that are partially known and unknown to the stakeholders for efficient exploitation (URT, 2019; Shemsanga, Omambia & Gu, 2010). This is supported by Couteau and Coiffard (2020) that MR exists in vast numbers and shows enormous diversity. Consequently, these MR need to be efficiently exposed to stakeholders/entrepreneurs to exploit for livelihood development and attain BE. This study, therefore, aimed to identify what one (stakeholders/entrepreneurs) may perceive as the focus areas to benefit from in the MR for the economic growth and development.

The MR usage is of importance to economic growth, improving the livelihood, and supports the attainment of the BE if well planned and utilized (Wenhai et al. 2019; Keen, Schwarz, & Wini-Simeon, 2018). The BE is focusing on stimulating the low-cost by encouraging marine industrial activities, water transport, mineral resource development, shipbuilding, communication cable laying, pharmaceutical enterprises, equipment development, sustainable energy from waves, currents, seaside leisure tourism, fisheries and aquaculture (Wenhai et al. 2019). Thus, MR and ocean spaces are a significant issue for people to exploit due to intensified activity and competition in utilizing the marine environment (Bennet et al. 2018). A study by Zhang et al.

(2019) posits that ocean has an untapped material resource for biomedical applications like nacre-derived materials which are abundant in the ocean and provide an economic way for developing new materials, as they are essentially the residues of seashells. Furthermore, Zhang postulates that natural polymers from MR have been attracting increasing attention in recent years, as they are biologically active and abundant compared to polymers from other resources (pg.17). Additionally, the marine-derived biomaterials have emerged as commonly-used hydrogels in 3D bioprinting for regenerative medicine, such as tissue repair and regeneration during recent years. However, due to its capability to fabricate patient-specific 3D scaffolds containing various cells with well-controlled porous architecture, 3D bioprinting has become widely utilized for regenerative medicine. Evidently, water body is a huge reservoir of natural biopolymers and life origin in which raw marine materials are a source for biomedical applications for 3D bioprinting (pg. 18).

According to Couteau and Coiffard (2020), the marine ecosystem is very rich and numerous species of macroalgae, microalgae, and halophilic plants may be used to manufacture products with varied properties (i.e. moisturizing, anti-ageing, and slimming). The MR especially that group of algae species is used as ingredients in manufacturing cosmetology products. Aquafeeds denote any food given to aquatic farmed animals as part of MR. Fish that is both farmed and wild need a balanced combination of important nutrients such as amino acids, fatty acids, and vitamins to flourish. Thus, aquafeeds are developed from MR in a combination with fish oil and fish meals among other ingredients (Dawood & Koshio, 2020; Turchini, Trushenski, & Glencross, 2019; Shah et al. 2018; Daniel, 2018; Tacon & Metian, 2008). The feed ingredients support and sustain the growth of the aquaculture sector and preserve the unique combination of nutrients needed to sustain healthy fish and the welfare. Thus, according to Turchini et al. (2019) “the nutritionists’ mission is to identify a mixture of marine resource ingredients that satisfy the intended species’ dietary requirements and tolerances and that can be manufactured to the desired pellet specifications.” This implies that rigorous scientific research in MR has driven major improvements in the sustainability and efficiency of aquafeed production, healthy fish, and the welfare of people.

Liu et al. (2020) revealed that MR can be used for coastal industries, urban construction, offshore wind power, coastal tourism, sewage dumping, open mariculture, and enclosed mariculture.

Accordingly, Tanzania is endowed with vast water bodies ranging from ocean, lakes, and rivers that have not been efficiently exploited to uncover available MR for use (URT, 2019; Semboja, 2021). Furthermore, the marine resources currently known, and unknown have not been fully placed in factual utilities. For example, Tanzania hardly use MR to produce pharmaceutical products, equipment development, sustainable energy from waves, currents, coastal leisure tourism, cosmetology, aquafeeds, and many others (Wenhai et al. 2019; Dawood & Koshio, 2020; Couteau & Coiffard, 2020; Zhang et al. 2019). Thus, uncovering the available partially tapped and untapped MR is vital for stakeholders (indigenous, non-indigenous, entrepreneurs, etc.) to start effective and efficient exploitation of the same. Consequently, an in-depth research in the area of MR is paramount to invent possible valued product that can be utilized to attain BE. Thus, the MR practitioners', policy makers, investors, entrepreneurs and other interested organizations should start thinking of how to exploit the existing opportunities in Tanzania. Consequently, the aim of this study is to reveal the partially tapped and untapped MR in Tanzania, opportunities and gaps to bridge to realize growth and attain BE.

Research Questions

RQ1. What are the partially tapped and untapped MR available from the literature reviewed in Tanzania?

RQ2. What are the gaps identified from the literature covered hindering the exploitation of the MR in Tanzania?

Research method

The study is qualitative and adopted a systematic literature review (SLR) approach that requires doing a basic logical study to identify work done in the area and, if any is found, to verify if those results yield an answer to research questions (Torres-Carrion, Gonzalez-Gonzalez, Aclar, & Rodriguez-Morales, 2018). SLR is a standard protocol that uses preferred reporting items for systematic reviews and meta-analysis (PRISMA), and involves a thorough, transparent, and replicable process for the literature search of both theoretical and empirical studies related to MR (Şalvarlı & Griffiths, 2021; Følstad & Kvale, 2017). Misaki, Apiola, Gaiani and Tedre (2018) posit that "SLR help to identify, analyze, and synthesize the best research on a specific subject, save practitioners time, and support evidence-based practice" (c.f. Morgan & Florez, 2022). The

SLR is comprehensive and logical search that identifies entirely eligible articles on the topic and uses specialized search tools and methods (Siddaway, Wood, & Hedges, 2019). It therefore, gathers information from diverse related articles and justifies areas for future research (Cronin, Ryan, & Coughlan, 2008; Morgan & Florez, 2022). SLR involves an analysis of literature to interpret the findings discovered by other contributors, identifies what is experienced and unknown in the study area to establish a knowledge gap, or debate, and identifies areas for further research (Morgan & Florez, 2022; Misaki et al. 2018; Okoli, 2015). The arrangement of review considered the most recent references that correspond to research questions and established online search strategies. The extracted information was coded and categorized according to the research questions. The following section presents the description of the study area, the source of data, the search keywords, the inclusion and exclusion criteria, filtration process and the data analysis.

Study area

Tanzania is located in the east of Africa's Great Lakes north of Mozambique and south of Kenya, it has a long coastline at the Indian Ocean stretching from Tanga to Mtwara regions with 1,420 km. It is bordered by six other African countries that are Burundi, the Democratic Republic of the Congo, Malawi, Rwanda, Uganda, and Zambia. Tanzania also shares maritime borders with Comoros and Seychelles. It has shorelines at three of the Great Lakes: Lake Victoria, Lake Tanganyika, and Lake Nyassa/Malawi.¹

Data sources

The literature search was conducted from May 05th, 2022 to July 29th, 2022, through sources such as Google Scholar, Google search, conference proceedings, and websites. These sources were chosen because they are easily accessible, through the College of Business Education Dar es Salaam Campus library (see Duncombe, 2016; Anjum, 2015).

Search keywords

¹ <https://www.nationsonline.org/oneworld/tanzania.htm>

The following set of keywords was used in the search: (“Blue economy” OR “Marine resources” OR “Marine ecosystem” OR “Ocean resources”) AND (“Tanzania” OR “East Africa” OR “Zanzibar” OR “Africa” OR “United Nations [UN]”).

Inclusion/exclusion Criteria

Literature on BE or MR written in the English language was included otherwise, excluded. The data extractions were limited to articles that mention Tanzania, Zanzibar, and East Africa MR only. This study does not have limitations of the literature search period because BE is a new concept and has inadequate research articles that could answer research questions.

The filtration process of relevant articles

The study guided by PRISMA and using each search term retrieved and selected between 4 and 7 foremost research studies in every sources, and the process ended at a saturation point where no new study was identified (Şalvarlı & Griffiths, 2021; Islam & Aldaihani, 2022; Braun & Clarke, 2021). Consequently, the Google Scholar search retrieved a total of 181 publications, including 369 publications from Google search, 24 publications from Conference proceedings, 6 publications from websites. The selected sources identified a total of 587 studies, which were further filtered to 35 by dropping the triplicates and duplicated titles, and studies not related to MR or BE in Tanzania (c.f. Morgan & Florez, 2022; Şalvarlı & Griffiths, 2021; Siddaway, Wood, & Hedges, 2019). Thereafter, the 35 studies were further filtered to 10 through inclusion and exclusion criteria, reading abstracts, executive summaries, and introduction, and unclear article source was dropped. The filtering process was based on identifying whether there MR mentioned or discussed, answer the research questions, and gaps in any of the sections. Then, a full-text reading of 10 eligible articles focused on extracting relevant MR and gaps to be bridged to efficiently exploit available wealth to attain BE.

Data analysis

This study applied content analysis (CA) as a systemic, replicable technique for compressing many words of extracted text into fewer content categories based on explicit rules of coding (Stemler, 2000). The CA enabled to sift through large volumes of data extracted with relative ease in a systematic fashion and facilitated to examining of trends and patterns of extracted

information thereby, building themes. Furthermore, Misaki et al. (2018) postulate that theme building is a common, flexible, and uncomplicated method of data analysis. It identifies, analyses, and reports findings on the basis of the enduring pattern, i.e. coding, validation, theme identification, and consolidation (Javadi & Zarea, 2016).

Results

The presentation of the results follows the two research questions.

RQ1. What are the partially tapped and untapped MR available from the literature reviewed in Tanzania?

The study synthesized MR where opportunities are partially tapped and untapped in the following areas; *seaweed* (Ndawala, Msuya, Cabarubias, Buriyo, & Cottier-Cook, 2021; Käyhköä et al. 2019; Samoilys & Kanyange, 2008; Sallema & Mtui, 2008; Francis & Bryceson, 2002), *mariculture* (Ndawala et al. 2021; Samoilys & Kanyange, 2008; Francis & Bryceson, 2002), *fish* (Gates et al. 2021; Samoilys & Kanyange, 2008; Yanda, Mabhuye, & Mwajombe, 2021; Jiddawi & Öhman, 2002; Sallema & Mtui, 2008; Mwaijande, 2021; Francis & Bryceson, 2002), *oil and gas* (Gates et al. 2021; Mwaijande, 2021), *coastal tourism* (Käyhköä et al. 2019; Samoilys & Kanyange, 2008; Mwaijande, 2021; Francis & Bryceson, 2002), *coral reef* (Käyhköä et al. 2019; Samoilys & Kanyange, 2008; Jiddawi & Öhman, 2002; Sallema & Mtui, 2008; Francis & Bryceson, 2002), *mangrove* (Samoilys & Kanyange, 2008; Yanda et al. 2021; Machumu & Yakupitiyage, 2013; Sallema & Mtui, 2008; Francis & Bryceson, 2002).

RQ2. What are the gaps identified from the literature covered hindering the exploitation of the MR in Tanzania?

The study from the SLR identified the gaps to be bridged for efficient exploitation of the MR in the following areas; low skills and knowledge (low-capacity building and inadequate training), lack of modern fishing inputs, lack of suitable market, financial constraints (Samoilys & Kanyange, 2008; Jiddawi & Öhman, 2002). Furthermore, inadequate research and research institutions, unawareness of MR, lack of commitment and empowerment, insufficient transparency and accountability, the inadequate collaboration between local people and

government institutions, and inadequate inclusive policy making (Ndawala et al. 2021; Francis & Bryceson, 2002; Masalu, 2000).

Discussion

This study identified MR partially tapped and untapped as area where an opportunity does exist if efficiently exploited may improve economic growth and ultimately attain BE. Effective and efficient exploitation of MR is likely to drive Tanzania to attain a BE that ultimately improves the livelihood. For example, seaweed refers to thousands of species of macroscopic, multicellular, and marine algae and available in Tanzania. They have potential to provide a rich and sustainable source of macro and micronutrients to human diet when used frequently in meals (Cherry, O'Hara, Magee, McSorley, & Allsopp, 2019). Furthermore, seaweeds can be used in the nutraceutical industries as a way to reduce the often-expensive disease treatment approaches that are currently employed in developed countries (Cherry et al. 2019; Francis & Bryceson, 2002). The nutraceutical industry incorporates three main sectors which include functional foods, dietary supplements, and herbal or natural products (Melanie, 2020). This area of MR remains inadequately tapped to attain BE and requires interested stakeholders to intervene and efficiently exploit these opportunities.

The other opportunity is an investment in the mariculture resources that have been partially tapped and untapped along the coastline. Mariculture refers to the cultivation of marine organisms for food and other animal products in an enclosed section of the open water like fish farms in artificial reservoirs, ponds, or raceways that are filled with water (Oyinlola et al. 2018). Mariculture is one of the fast-growing food sectors globally and protein provisioning currently exceeds that from wild capture fisheries (Brown et al. 2019; Yu & Yin, 2019). Unfortunately, this sector has not been fully, effectively, and efficiently exploited and requires entrepreneurs to utilize this available opportunity to achieve BE.

There is enough stock of fish yet inadequately exploited in the ocean, lakes, and rivers among others (Gates et al. 2021; Yanda et al. 2021; Mwaijande, 2021). Fish is a scaly-skinned vertebrate animal that swims in water and breath using gills. Fishing in Tanzania is basically undertaken in shallow water implying, a lack of deep-water fishing especially in the Indian

Ocean with abundant fish stock and inadequately exploited in Mkokotoni, Matemwe, Lindi, Mtwara, Chwaka/Marumbi (Francis & Bryceson, 2002). The fishing business is an important activity that plays the role of a source of protein-rich food and employment, which ultimately transforms the welfare if properly utilized. Thus, there are more than 500 species (Jiddawi & Öhman, 2002) in Tanzania, and this study recommends for fishing stakeholders to invest abundantly in the fishing industry to attain a BE.

An opportunity for exploitation does exist in the oil and gas sector available currently in Mtwara and Lindi regions, although further explorations are still underway to date in other regions (Gates et al. 2021; Mwaijande, 2021). The oil and gas sector requires an in-depth exploration, extraction, refining, transportation, and marketing of petroleum products. It is a global powerhouse employing hundreds of thousands of workers worldwide and generating hundreds of billions of dollars globally each year and often contributes significant revenues toward national income (Muspratt, 2019). Unfortunately, this area in Tanzania is still partially tapped and, in some cases, not yet explored to ensure that MR is effectively and efficiently utilized. Thus, the study recommends conducting more exploration research, but also inviting investors through conducive policy to help tap the resource to improve the quality of human life.

A coral reef is another area in MR that has not been fully tapped or utilized although it is abundant along the coastal area in Tanga region (Käyhkö et al. 2019; Samoilys & Kanyange, 2008). Coral reef ecosystems are the diverse collections of species that interact with each other and the physical environment that forms sandstone and limestone (Ren & Wenjuan, 2019). According to environmental protection agency ([EPA], 2022) “an estimated 25 percent of all marine life, including over 4,000 species of fish depends on coral reefs at some point in their life cycle.” Additionally, approximately one billion people worldwide benefit from the many ecosystem services coral reefs provide including food, coastal protection, and income from tourism and fisheries (Hoegh-Guldberg, Pendleton, & Kaup, 2019; Hicksa & Cinnera, 2014; Ahmed, Umali, Rull, & Garcia, 2007). These evidence the significance of coral reef in Tanzania that has not been fully utilized to benefit the community. Thus, the study recommends to the government to initiated awareness campaign and empowerment of citizens to exploit reef resource opportunities available to attain BE.

The mangrove is a tropical or sub-tropical evergreen salt-tolerant tree especially of the family Rhizophoraceae forming dense thickets along tidal shores and typically having well-developed aerial roots. The mangrove tree is untapped resource that needs to be exploited to achieve BE in Tanzania (Yanda et al. 2021; Machumu & Yakupitiyage, 2013). According to Su, Friess and Gasparatos (2021) mangroves contribute to climate regulation through carbon appropriation, provide habitat and nursery grounds to many species, protect local communities from coastal hazards, and provide cultural ecosystem services such as ecotourism. Furthermore, mangrove contributes to increased stock of fish, timber production and honey, wastewater treatment, education and research. Mangrove is tapped for wood, charcoal, tannin, construction materials, household equipment, medicine, fuel, shrimp, vegetable and raw material (Onyena & Sam, 2020; Rizal & Herawati, 2018; Seary, Spencer, Bithell, & McOwen, 2021). Thus, Tanzania mangrove resources have partially been exploited as there are a lot of existing opportunities that need to be utilized. Consequently, the study recommends to the government an awareness campaign, commitment, policy, and rigorous research on mangrove plants to enlighten stakeholders' knowledge to improve the exploitation of the resource to attain a BE.

However, the study identified some gaps that would improve the exploitation of MR and growth to attain BE if solution to them is provided. The gap in low skills and knowledge which is associated with low-capacity building and training hinders the exploitation of the MR (Samoilys & Kanyange, 2008; Jiddawi & Öhman, 2002). Therefore, learning activities need to be undertaken by government through education and training that is appropriate alternative to bridge the gap in low skills and knowledge in utilizing the MR. This implies building the capacity of the respective stakeholders to exploit the partially tapped and untapped MR is paramount in this context. The importance of providing education and training to improve the capability has been discussed in the literature and has shown greater significance in improving performance (Ferrero et al. 2019; Umemiya, Ikeda, & White, 2020; Brownson, Fielding, & Green, 2018). Consequently, this study recommends the provision of education and training to related marine stakeholders that ultimately enable to have a wider insight/capability and awareness in the area of utilizing the MR to attain the BE.

A gap does exist in inputs used for exploiting the MR (Samoilys & Kanyange, 2008; Jiddawi & Öhman, 2002). For example, unstable profits were realized in the Tanga region due to the small-

scale mariculture production because the community lacked physical and modern technical inputs to increase productivity (Samoilys & Kanyange, 2008). Thus, traditional input can be supplemented by modern equipment to efficiently exploit the MR. Furthermore, a number of studies evidence that the application of modern inputs is likely to increase productivity (Bachewe, Berhane, Minten, & Taffesse, 2018; Uduji & Okolo-Obasi, 2018; Mukasa, 2018). Thus, little has been conducted to equip the coastal communities with modern technology to exploit MR to attain a BE. The study recommends more use of modern equipment associated with the government creating an easy way to access them through soft credit offers in financial institutions.

The other gap is the lack of market to sell the little produce (Samoilys & Kanyange, 2008; Jiddawi & Öhman, 2002). The market is a composition of arrangements, institutions, processes, social relations and infrastructure whereby sellers and buyers participate in exchange of goods or services that seems to be a challenge. The produce from MR hardly accesses the foreign market and domestic market is limited to local communities that offer lower prices to products. The low market share depends on the way MR produce penetrates into different market segments, brand and packaging of the final product (Romaniuk, Dawes, & Nenycz-Thiel, 2018). Thus, the market gap need to be taken into account by government to facilitating people to access foreign market that has challenging conditions like constant supply of marine product throughout the year. Capturing foreign market can result in creating economies of scale and market power that ultimately leads to an outstanding return on investment and a great profit (Nazaritehrani & Mashali, 2020). Therefore, striving to access a significant market is of great importance to local marine product that wants to mature and survive in a competitive environment through government support.

The financial constraint was also identified as among the gaps to be bridged facing the local exploiters of MR (Samoilys & Kanyange, 2008). Financial constraint is any factor that restricts an individual or institution's access to the amount or quality of investment options deemed to be appropriate in time. The importance of financing is its capacity to keep the activity going on smoothly without running out of cash and securing funds for a longer-term investment (Nordqvist, 2020; Duff, 2019). Thus, access to the financial institution for credit should be made

simple, transparent, and unbureaucratic with an adequate formulation of inclusive (Masalu, 2000) policies incorporating the local environmental requirement.

Inadequate research and research institutions hinder the publicity of available MR which could be exploited by local and global entrepreneurs (Ndawala et al. 2021). Frequent research and active research institutions create long-term benefits through the cooperation of local people, entrepreneurs, politicians, and scholars in different BE areas (Shapovalov (Jr.) et al. 2017). The continuous research on the BE specifically MR would accelerate the development of the comprehensive marine industry. It is therefore prudent to have more research and research institutions fully government-funded public and private institutions partnership to frequently undertake research business in MR to attain BE.

Conclusion

To understand and utilize the MR effectively and efficiently, this study sought to identify the available MR to exploit opportunities and gaps to bridge to attain a BE. The BE is a new development concept and important to achieving sustainable development if MR is efficiently utilized. Resources identified with opportunities from the literature to exploit include Seaweed, mariculture, fish, oil and gas, coral reef, and mangrove. However, gaps to bridge are found in skills and education, input, market, financial constraints, inadequate research and research institutions.

The study recommends to the government to launching continuous awareness, education and training, empowerment, ease of access to credits, rigorous conducting and funding of research activities, expanding the market access of local MR, and the use of modern inputs. It should be noted that BE is a wide area that need a lot of researches and this study is not exhaustive, but only provides a snapshot of the MR. Thus, more research and other methods other than SLR should be applied to understand the integral area of BE in general.

Funding

No funding

Acknowledgement

I thank the two unanimous reviewers for their time and effort to have reviewed the article

Disclosure statement

There is no potential conflict of interest.

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Factors Leading to Scarcity of Fresh Fish Food Along the Continuum of Fish Farming of Kola-Kisarawe, Tanzania

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Abstract

Fish feeding are more crucial on how fish farmers carry out their functions. However, only a few studies have interfered with this relevance. This study explores how fish farmers affected by the lack of fish food. It delves deeper into explore factors leading to scarcity of fish food along the continuum of fish farming of Kola-Kisarawe and recommend strategies for improving the same. The study carried out at Kola-Kisarawe Tanzania. Data were collected using a qualitative approach with a case study design. Method of data collection were key informant interview, and participant observation. 5 key informant's respondents were made up the study's sample, which were selected using purposive sampling technique. Content analysis was used to analyze qualitative data with the application of MAXQDA 10 software. Findings showed the scarcity of fish food were rotated around to the lack of Fresh fish feeding and financial assistance such as high cost of fish food, lack of fund for adequately purchases fish food as well as lack of quality food. Also, Fresh fish feeding formulation such as lack of designing fish formulation process, lack of laboratory, lack of sufficient information for obtaining fish food, lack of experience and knowledge to produce fish food as well as unfavorable storage conditions were other factors. Similarly, fresh fish feeding network were associated to absent of network of food source, poor government support, lack compliment food sources, poor communication and cost of purchases food. Finally, inadequate knowledge and information for fish food were caused by poor government intervention, inadequate knowledge and skills as well as inadequate storage and handling of fish food. The study recommends stakeholders to install modern facilities for

manufacturing fish food, provision of financial aids and sensitization of knowledge to improve fish food production and minimize freight charges involved in importing fish food.

Key words: Factors, Scarcity, Fresh Fish, Fish Food, Fish farming

Introduction

Because it provides for immediate necessities including money, minerals, vitamins, the development of jobs, and export revenue, fish farming is crucial to farmers (Charo-karisa et al., 2014; Wied, 2017). It also helps to raise national income, lower mortality rates, improve maternal health, and reduce poverty (Agyakwah et al., 2020). However, the reality demonstrate that fresh fish farmers make deliberate efforts in practicing fish farming that on the one hand allow them to acquire and increase their living standard as well as accomplishing the greatest use and consumption of fish (Vilain & Baran, 2016; Obiero et al., 2019).

In a similar line, fish feeding activities include maintaining fishing growth and raising fingerlings in addition to promoting fish quality, quantity, and producing demand and supply in the fisheries trade (Abo-Taleb et al., 2021; Huntington, 2004). In light of this, it is reasonable to draw the conclusion that the production of good meals, effective feeding techniques, and fish growth and development are all essential elements of fish farming (Allen Pattillo, 2014). However, the technique greatly aids the fisher farmers in ensuring that fish is available in the competitive market while also, to a certain extent, ensuring that the fish supply chain is accessible to customers and traders in particular (Joshua et al., 2017).

By definition, fresh fish food refers to the quantity and frequency of materials used to feed fish (Joshua et al., 2017). It comprises of a variety of food ingredients that are typically used by fish farmers to make fish feeding easier. Aquatic plant fragments, phytoplankton, zooplankton, trash, detritus, insects, and partially digested food components are just a few examples (Manon & Hossain, 2011; Vilain & Baran, 2016). Fish feeding entails the placement and selection of necessary nutrients, including protein, lipids and fatty acids, carbs, vitamins, and minerals that support the growth and development of fresh fish (Paul et al., 2017).

In other circumstances, the food and procedures for feeding fish are typically carried out both formally and informal, with an emphasis on the characteristics of fishing farming and ponds (Paul, et al., 2017). However, modern fish farmers that are involved in the construction of

technology facilities that serve to generate food substances organize formal fish feeding. Demand feeders, mechanical feeders, computer-controlled automatic feeding systems, and belt feeders are some of these. Additionally, they are responsible for investing in the necessary equipment for growing and producing their own food to feed young and mature fish. However, because it includes scheduling and planning for feed, the method significantly differs from local fish farming (Elfitasari & Albert, 2017). In the context of informal fish feeding, this task is completed by local fish farmers who employ the manual distribution of food to feed the fish and discard all necessary food in the ponds (Kaushik, 2013). They also play a significant role in providing fish food at certain locations using their own methods. For instance, they disrupt feeding schedules, employ restriction feeding methods such as employing bags, and encourage natural pond productivity (Charo-karisa et al., 2014).

Additionally, fishermen use fish feeding techniques and/or methods to promote and/or maintain fish growth. For example, they are making sure that there is adequate feed and food allocation, feeding to satiation, feeding response, feed preservation, frequency and duration for feeding, as well as adoption of circular rhythms for feeding fingerlings (Allen Pattillo, 2014; Kaushik, 2013). In other cases, fish farmers employ commercial feed formulas that have the right nutrient ratios, stocking densities, aeration, and water exchange to make it easier for fish to eat (Paul et al., 2017; Abo-Taleb et al., 2021).

Moreover, data demonstrates that fish farming in East Africa continues to perform poorly as a result of a variety of issues that make it difficult for the industry to advance and which have been linked to a shortage or deficiency in fish food (Joshua et al., 2017). The overall scenario is that there is still a propensity for fish food scarcity, which has persisted as one of the obstacles to the implementation of fish farming in Sub-Saharan nations, including Tanzania. Due to a lack of suitable facilities for generating fish food, this hardly shows that most fish farmers performed localized fish farming while few agreed with contemporary fish farming (Elfitasari & Albert, 2017). Examples of significant causes that contribute to this scarcity include the lack of effective and expensive fish food at various phases of fish growth and development, poor feed management techniques, a lack of variety among the species of cultured fish, and poor-quality seed fish. According to this context, inadequate development of fish seed, incorrect feeding volume and timing, a lack of government assistance and training, a lack of technical skills,

inadequate quality of fish food, and inadequate quality of fish seed are some of the issues that prevent fish feeding (Elfitasari & Albert, 2017). According to the literature, there are no government-adopted initiatives in Tanzania; instead, there is a lack of stakeholder involvement that they would consider investing in the production of fish food. Furthermore, the government had rarely neglected to assist fish farmers by providing financial assistance to purchase necessary materials for fish farming, including fish food, in addition to insuring fish feeding.

Sadly, despite the significant advantages provided by the practice of fish feeding in the continuum of fish farming, it appears that there is still a significant lack of fish food in Tanzania compared to the efforts made by fish farmers to practice fish farming. This situation jeopardizes their agreed-upon efforts because some farmers view the practices as unworthy of supporting their own economic and livelihood (Abo-Taleb et al., 2021; Adhikari, 2017). This hardly also shows that their efforts in conducting fish farming are still ineffective insofar as obtaining enough fish food and feeding the fish, as the income becomes lower than anticipated as first required by farmers (Kessuvan et al., 2015). This leads to the further conclusion that whether they continue to undertake fish farming formally or form it traditionally, fresh fish producers lie on the gloomy cloud. They believe that correct processes are necessary for fish farming, including appropriate fishing facilities, stakeholder perspectives, and interventions to ensure adequate fish feeding (Shoko et al., 2019; Oeste et al., 2014). This study makes the essential recommendation that both the public and commercial sectors should be willing to invest in fresh fish farming, where fish feeding procedures must be carefully considered in order to preserve fish growth and development.

Furthermore, other studies are considered to be discussing these corporate sectors, including (Kaushik, 2013; Joshua et al., 2017; Vilain & Baran, 2016; Obiero et al., 2019; Elfitasari & Albert, 2017; Shoko et al., 2019; Oeste et al., 2014). The majority of these publications, however, have been on the poorer farmers and have not discussed how this issue affects even wealthy farmers. The studies also fail to clarify the extent to which the scarcity hinders the growth, development, harvesting, and supply of fish products. Unfortunately, their findings do not allow for a conclusion to be drawn and the scarcity to be generalized in the Tanzanian context, despite the existence of various perspectives illustrating the scarcity of fish food as well as the difficulties that fish farmers encounter when practicing fish feeding. Various

circumstances, actions, and efforts that fish farmers used to develop fish feeding are what cause this. In addition to the foregoing, no specific studies have been carried out in Tanzania too far to clarify how government and private players could help fish farmers in producing fish food for completing the full fish farming process. Due to fish farmers' continued reliance on fish farming as their primary source of income, there is little information accessible about the factors that cause a shortage of fish food. In light of this, the major goal of this study is to explore the causes of fish food scarcity along the continuum of fish farming in Kola-Kisarawe, Tanzania, and then to recommend solutions. Finally, this study is a cornerstone because it gives practitioners in fish farming and supply chains a better understanding of the fundamental factors that contribute to the severity of a fish food shortage throughout the continuum of fish farming. It also enables policymakers to come up with an effective plan to ensure the release of full acceptance measures that can help to minimize the shortage of fish food in fish farming.

Problem statement

Fresh fish farming is still in its infancy despite the enormous advantages and value gained via its use and adoption, as well as crucial roles seen across the fresh fish supply chain and willing efforts made by fish farmers. Due to the degree of the shortage of fresh fish food, which is impeding the growth, development, and supply chain of fish products in this context, it is also less effective and unsatisfactory among fresh fish farmers in Kola-Kisarawe, Tanzania. Fish foods are scarce because of a lack of funding, a lack of a formulating process for fish feed, a lack of a feeding network and technology, and a lack of knowledge and information on where to buy fish food (Elfitasari & Albert, 2016). This casts a very bad light on the efforts fresh fish farmers make to produce high-quality fish while, in some cases, depending on these endeavors as their only source of income (Abo-Taleb et al., 2021; Allen Pattillo, 2014; Kaushik, 2013; Manon & Hossain, 2011; Vilain & Baran, 2016). However, despite the significant advantages gained from raising fresh fish, the lack of food makes it seem unimportant, which stunts the growth, development, and availability of freshwater fish (Abo-Taleb et al., 2021; Kaushik, 2013).

Unfortunately, very few studies specifically address this subjectivity, including but not limited to (Kaushik, 2013; Joshua et al., 2017; Vilain & Baran, 2016; Obiero et al., 2019; Elfitasari & Albert, 2017), but these studies were unable to shed light on the extent of the scarcity of fresh fish foods to the issue related to financial support, fish feeding formulation process, feeding

network, technology, and knowledge. Due to the aforementioned problematic situation, this study aims to explore the causes of fish food scarcity along the fish farming supply chain at Kola-Kisarawe and then offer appropriate action to end the unrest situation.

Rationale of the study

The study's conclusions are useful to decision-makers and a variety of stakeholders, including fish farmers, state governments, and fish processing businesses, in the area of the shortage of fresh fish feeding throughout the fishery supply chain. Since the fish farming sub-sector contributes significantly to the blue economy in general and to the government in particular, the paper also assists the government in becoming aware of the methods for feeding fresh fish and its benefits to community livelihood. In fact, the study imparts useful information on the value of feeding fresh fish to society and fish farms. Its then support decision-makers in creating plans to invest in fish feeding to promote fish growth and farming, creating self-employment opportunities and bettering living conditions.

Research objectives

Based on the foregoing background, the overall objective of the proposed work is to assess the factors leading to the scarcity of fresh fish foods along the continuum of fish farming in the business supply chain. Specifically, the work intends:

- To examine the factors that contribute to the scarcity of fresh fish foods along the fish farming continuum in the fishery supply chain.
- To recommend strategies to reduce the scarcity of fresh fish foods along the continuum of fish farming in the fishery supply chain

Literature Review

Theoretical review

The theory of constraints (TOC), which was created by Eliyahu M. Goldratt in 1984, serves as the foundation for this work. A management strategy known as the Theory of Constraints (TOC) has been used to emphasize corporate operations in order to deal with restrictions and constraints in particular. In fact, this theory's main objective is to increase a practice, process, or activity's

efficiency while also enhancing profitability, quality, and the achievement of the main goals (Williams, 2010). Additionally, the theory of constraints strives to maximize earnings and the efficient use of resources (Gupta & Boyd, 2008). According to the principle, every company's primary goal is to boost profits. However, limitations end up being the biggest barriers to making profitability for businesses. Also, businesses would have a continuous improvement management system and higher profits if they were able to control restrictions in their systems (imsit et al., 2014).

According to this theory's implications for this study, businesses can engage in activities that increase their profitability while still encountering obstacles or limitations in reaching their desired objectives in other situations. Moreover, the authors apply this theory in order to learn more and comprehend the factors or limitations causing a shortage of freshwater fish feeding throughout the entire fish farming process in the commercial supply chain.

Empirical review

The factors affecting the lack of freshwater fish feeding across the supply chain's continuum of fish farming have been the subject of a critical literature review. We concentrate on the key aspects of fish feeding, such as formulation of the diet, handling and storage of the food, financial support, and networking and technological advancements. These topics are further covered in the literature that is available below.

Literature demonstrates that the issue of fresh fish feeding and financial aid is related to a lack of funding for enabling farming and feeding (Charo-karisa et al., 2014; Elfitasari & Albert, 2017). The expensive price of high-quality foods and the difficulty in obtaining financial support for the purchase of fish food are further deterrents in this area (Heenatigala, 2007).

In addressing the issue of fresh fish feeding formulation, research demonstrates that inadequate feed formulation formula and materials, a lack of a laboratory for producing fish food, subpar food storage facilities, as well as insufficient experience and knowledge of fish farmers, are the crucial factors that cause fish foods to be scarce (Charo-karisa et al., 2014). However, the elements that prevent fish from being fed are a lack of a source of information for getting food ingredients and experience in making diets (Elfitasari & Albert, 2017).

Literature mentions yet another category that is related to network and technology for fish feeding in the context of fresh fish feeding. Lack of networks for locating food sources is one of the contributing causes (Charo-Karisa et al., 2014). Lack of government assistance for the provision of raw materials, a shortage of technological know-how for fish growth and development, and a lack of supplemental food sources like enzymatic materials are further linked issues (Elfitasari & Albert, 2017). Another difficulty with scarcity is the lack of communication between exporters and small-scale farmers, which is exacerbated by the high cost of food (Heenatigala, 2007).

Finally, the problem of feeding fresh fish is one of knowledge and information, and literature highlights yet another aspect of this by emphasizing the high freight costs for purchasing and transporting food and fish, a factor that is brought on by the low cost of feed preparation, the lack of knowledge and expertise among farmers, the lack of storage and handling materials, and the inadequate storage and handling facilities for fish feeding (Charo-karisa et al., 2014).

Conceptual framework

This conceptualizes various parts of the research problem and goals, including the causes of the lack of fresh fish foods and the anticipated solutions at Kola-Kisarawe. The issue at hand is the lack of fish food in the context of fish farming in the fishery supply chain, which is examined appropriately through the aspects of feeding formulation, feeding with handling and storage, feeding with financial assistance, as well as feeding with networking and technology (Charo-karisa et al., 2014). (Elfitasari & Albert, 2017). It determined that there is still a shortage of fresh fish food throughout the spectrum of fish farming in the sub-sector of the fisheries supply chain and blue economy in general, despite the advantages of conducting fresh fish farming in the fishery supply chain and commerce in particular. However, it is essential to look at the factors causing the scarcity of fresh fish foods along the continuum of fish farming in the fishery supply chain in order to decrease or rather regulate the scarcity. It is anticipated that the data resulting from the evaluation of the factors can be trusted to enhance fresh fish feeding in fish farming.

Methodology

The Kisarawe District in the coast region, where freshwater fish farming is practiced in much bigger quantities, was the focus of this study, which was conducted there. The study was

specifically carried out at the freshwater fish farms in Kisarawe from Jakicha agri and acqua farm, Kisakeni freshwater fish farm, Mbuge freshwater fish farm, Nassa, and Dulla, where fish farmers are readily available and accessible, making it simple for the authors to get the correct information on the freshwater fish feeding and farming process.

Based on purposive samplings, five important informants, including five fish dams, were questioned. In order to obtain in-depth knowledge about the factors causing a shortage of fresh fish feeding and fish farming in the fishery supply chain, this study heavily utilized a qualitative technique (Mohajan & Mohajan, 2018). By using this method, the authors were able to interact with respondents and learn about their views towards fish feeding (Astalin, 2013; Almalki, 2016). The method was effective and significant because it records respondents' feelings, attitudes, values, beliefs, and experiences after being interviewed using diaries, literary or journalistic works, audio or video cassettes, artworks, or even findings from close and systematic observation (Wisdom & Creswell, 201; Kothari, 2004; Mohajan & Mohajan, 2018). To enable a thorough and improved understanding of freshwater fish nutrition, this study used a case study methodology (Suryani, 2013). Five key informant interviewees and participant observation were used to acquire the data (Kothari, 2004; Saunders et al., 2009).

In order to get comprehensive information on the variables influencing the scarcity of fresh fish food throughout the continuum of fish farming in the fishery supply chain, the key informant interviews were purposefully conducted within 60 minutes at each pond. This approach was pertinent in that it involved questioning someone who had prior knowledge of the affected population in order to acquire crucial information about the causes of the lack of fish foods and steps to remedy the situation (Kun et al., 2013). Additionally, it offers a comprehensive and qualitative analysis of how a disaster affects residents in the town (Anom, 2011). In MAXQDA 20, content analysis for qualitative data and transcriptions was carried out, and the results are presented in relation to the study's major and specific objectives. A report was produced using the research objective.

Data were organized appropriately, and for each objective, codes and sub-codes were developed. A strategy for thematic data analysis was chosen. This required analyzing, sorting, and organizing the data as well as summarizing it. Also, the authors confirmed the validity and trustworthiness of the results through ongoing interaction and data auditing both before and after

the data gathering process. The employment of three different data collection methods, followed by data auditing and verifying, is known as triangulation. In order to provide certain responders with comments on the data they provide, the authors therefore went back to the field.

Results And Discussion

These findings center on the relationship between fresh fish feeding and financial support, fresh fish feeding formulation, fresh fish feeding network, and fresh fish feeding's connection to knowledge and information. In this regard, the lack of fresh fish food led to a catastrophe for fresh fish farmers in emerging nations, like Tanzania;

Scarcity caused by the lack of Fresh fish feeding and financial assistance;

Fish growth is hampered by a number of factors, including fresh fish feeding and funding (Charo-karisa et al., 2014; Elfitasari & Albert, 2017). According to 4 responders (80%), the scarcity in this area is brought on by high food quality costs. For instance, according to the survey participants, buying one bag of fish food from a supplier would cost around 65,000 TSH. They also noted how a lack of funds made it difficult to buy high-quality fish food. Additionally, respondents claimed that the high cost of food quality is a result of the lack of resources for creating a range of foods. Furthermore, only 3 respondents (60%) claimed that insufficient funding prevented them from purchasing enough fish food, while only 2 respondents (40%) disputed this claim. However, 2 respondents (40%) claimed that the scarcity of high-quality fish food has an impact on fish producers. For instance, consider the traditional fish farmers described below;

“Almost tradition fish farmers lack of quality food compared to the one who practice modern fish farming. As we (traditional farmers) use maize grain which do not composed with other nutrients as they done by modern farmers (Kisakeni, fish farmers, Kola-Kisarawe)”

However, as stated by 4 respondents (80%), the scarcity in this area was brought on by the lack of financial support for fish food purchases. They went on to say that there isn't enough government assistance to help them have enough money to buy high-quality food. The respondents emphasized that localized fish farmers did not receive commercial credit to purchase high-quality fish food, but one interviewee (20%) disregarded this fact by

claiming that commercial intermediaries gave loans to farmers to help them start and expand businesses similar to fish farming. Furthermore, as further described below, two respondents (or 40%) confirmed that a shortage of specific domestic food manufacturing businesses contributed to the scarcity of fish food in the fishing trade;

“In Tanzania, there is absent of company or special industries which can invest in producing variety of fish food which can be used to help fish farmers to buy adequate fish food. This is an opportunity in Tanzania and we urged the stakeholders to invest the same (Kisakeni, fish famer-Kola-Kisarawe)”

Based on research, it can be concluded that the scarcity of fresh fish feeding and financial support was one of the factors contributing to the lack of fish food. These factors include a lack of funding, the high cost of high-quality food, a lack of high-quality food, a lack of financial support, and the absence of domestic industries that could produce fish food. These findings line up nicely with the body of existing literature (Charo-karisa et al., 2014; Elfitasari & Albert, 2017; Heenatigala, 2007). The literature analysis did not, however, mention any factors associated to the absence of fish food manufacturing industry. This new factor has the potential to enhance and contribute to the current discovery.

The scarcity caused by poor Fresh fish feeding formulation;

The feeding formulation is one of the fish food shortages (Charo-karisa et al., 2014; Elfitasari & Albert, 2017). Findings indicate that fish farmers are hindered by a lack of fish formulation processes and materials for fish feeding, which are deemed to be in disrepair by more than four key informants (80%). The respondents also indicated that small-scale fish farmers were unaware of the existence of scientific formulas that could be used to transform food content into practical food gradients for fish feeding, although one respondent (20%) stated that they had traditionally mixed different foods to create such gradients. For instance, one respondent provided the following;

These fishes can be grown by mixing ordinary fish formula such as using soya beans 64kg, prone 195 kgs, cassava grains 60 kgs, sunflower 15 kgs, maize 180 kg as well as premix 1kg. The mixture helps to produce constant fish food which may help us to feed fish in this dam. While standard formula involved fish meal 65kg,

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cardina 50kgs, soya beans 200 kg, maize 150 kg, cassava 25 kg as well as vitamin 10 kg. However, we try to learn another variety in order to produce quality of food and fish in particular (Male fish famers, Jekicha Agri & Aqua farm, Kola-Kisarawe, Tanzania).

On the other hand, about 4 respondents (80%) believed that the absence of a facility for the production of fish food was another issue preventing local/traditional fish farmers from providing a smooth supply chain for fish. Only 1 respondent (20%) chose to disregard this issue. The answer noted that contemporary fish farmers had expanded their facilities for making fish food. For instance, the laboratory they utilize is equipped with gears and devices that make it possible to manufacture food, such carter feeders, feed motors, fish pirate machines, and die machines.

	
Machine used to mix fish food (photo; Issa, I, 2022)	Machine used to grand fish food (Phot Kisakeni, Y,2022)

Additionally, roughly three respondents (60%) claimed that a lack of information regarding where to buy fish food was a contributing factor in the scarcity of fish food. If fish farmers order fish food from overseas, this aspect causes the shipment to be delayed. However, 2 respondents (40%) choose to overlook this element, specifically traditional fish farmers, because they were not well managed when creating or purchasing fish food

from abroad. This was closely related to the fact that only one respondent (20%) said that fish farmers had learned how to mix and form a variety of foods to feed fingerlings and fish in general, while four respondents (80%) attested to the lack of experience and knowledge they had in making or even forming fish food. In fact, just one respondent, or 20% of the key informants, said that adverse storage conditions for fish food were to blame for the shortage of fish food, while four respondents, or 80% of the key informants, agreed that a lack of storage facilities was not to blame. Farmers pretend to store fish that has been polluted or damaged by fungus and other biological insects, they added. On the one hand, fish food was kept and placed in specialized packaging units, such as fish food sacs.

	
Types of fish food and packaging facility (Issa,I; 2022)	Example of powder for feeding fish (Issa, I; 2022)

In summary, the lack of a laboratory, the lack of adequate information regarding the sources of food, the lack of expertise and knowledge, and the adverse storage conditions for fish food were the main contributors to the scarcity of fresh fish feeding formulation. These results are consistent with certain earlier investigations (Charo-karisa et al., 2014; Elfitasari & Albert, 2017). The lack of a scientific formula that would allow fish farmers to convert different types of food to obtain a continuous fish gradient, in the fishery trade in general, is an interesting aspect of this subject.

The scarcity caused by poor fresh fish feeding network

According to research, the lack of a network in terms of food sources, government assistance, complementary food sources, communication, and food purchase costs is to blame for the scarcity of fish food (Charo-Karisa et al., 2014; Elfitasari & Albert, 2017; Heenatigala, 2007). Three (60%) of the respondents confirmed that traditional fish farmers lack a network for getting food sources from the market, whereas two (40%) of the respondents specifically said that modern fish farmers overlook this element. For instance, one respondent gives the following example;

Jekicha Agri & Aqua farm tried to build network of organization from Koudijs company. The company sells fish food which has been put into packages for protection as well as to maintain quality. As a farm we save our money and raise capital for purchasing fish food. It is the same way, we communicate with Koudijs when the food is almost finish (Jekicha Agri & Aqua farm, Kola-Kisarawe, Tanzania).

Findings also showed that 5 key informants (100%) agreed that a further source of shortage is the government's lack of assistance in providing finances and raw materials for the production of or purchase of fish food. The respondents stressed that, rather than providing financing to buy fish food, the government does not encourage fish farmers to create high-quality fish. Similar import taxes were required on businesses who ordered food from abroad. The efforts of the fish farmers to feed a diversity of fish in the fishing supply chain may be jeopardized as a result. Additionally, 100% of respondents overall said that a shortage of complementary food sources is to blame for the scarcity of fish food. They added that the low level of domestic markets and industries that could generate high-quality food was the cause of the absence of complement food. Also, they showed how fish farmers regularly feed both large and small fish with the same kind of food. Moreover, about three key informants (60%) believed that the scarcity of fish food is hampered by the lack of communication between farmers and exporters, which results in a lack of opportunities to identify markets. However, two key informants (40%) disagreed, arguing that communication between farmers and exporters is encouraged by clearly placing orders for the delivery of fish food. This was closely related to the fact that, as further stated by 5 key informants, the cost of buying fish food is much larger than the whole cost of managing fish farming activity.

Based on the aforementioned findings, it can be concluded that a lack of network sources, lack of government support, a lack of complementary food sources, a lack of communication between farmers and exporters, as well as the high cost of food purchases all contributed to the scarcity of fish food in the context of network-related food purchases. These findings are consistent with earlier research by (Charo-Karisa et al., 2014; Elfitasari & Albert, 2017; Heenatigala, 2007). The lack of food due to excessive costs of goods as well as inadequate government support for the availability of resources to grow or buy food was a topic of interesting discussion.

Fresh fish feeding is related to knowledge and information

Lack of knowledge and information on high freight costs for acquiring and transporting food, poor government intervention, insufficient knowledge and skills for preparing fish food, as well as insufficient storage and management of fish food, contributed to one of the shortages of fish food. According to the results, 4 respondents (80%) agreed that shipping and handling fees for fish food were greater than if it were manufactured locally. Furthermore, they claimed that low purchasing opportunities for fish farmers were caused by fewer suppliers due to high transportation and purchase costs. However, one respondent (20%) disagreed, stating that modern farmers now buy fish food from specific suppliers regardless of whether the freight costs are higher.

On the one hand, 5 responders or so (100%) claimed that the absence of government support was to blame for the shortage of fish food and the methods employed in fish farming. This implies that domestic fish farmers engage in fishing activities, including feeding fish, without receiving funding from the government. This may discourage them from producing high yields and high-quality fish products. Nevertheless, as verified by almost 4 respondents (80%), a lack of knowledge and abilities in the preparation of fish food was another issue contributing to the scarcity of fish food among fish farmers. A 20% of respondents disagreed with this statement and stated that their farm prepares fish food by using knowledge and skills for combining a variety of foods, such as a mixture of meal 65 kg, cardina 50 kg, soy beans 200 kg, maize 150 kg, cassava 25 kg, and vitamin 10 kg. They also claimed that no formula was used to prepare food other than the grain and powder used to feed fish.

Furthermore, just 4 respondents (or 80%) said that poor food handling and storage facilities posed additional issue for feeding fish. They also said that the ability of traditions fish farmers to

prepare fish food was compromised by a lack of handling and storage facilities, including sufficient packaging facilities like sacs or manual handling methods. While modern fish farmers like Jekicha Agri & Aqua farm, Kola-Kisarawe, Tanzania, have means of storage, packaging, and handling facilities such as tractor as well as motorcycle taxis for handling of food from production site to the pond for feeding fish, while only 1 respondent (20%) opposed this factor and further noted that traditional farmers prepare food in a local way, but they lack storage facilities such as packaging and handling facilities to support fish farming. It can be concluded that lack of knowledge and information on high freight costs for acquiring and transporting food, lack of government support, inadequate knowledge and abilities for preparing fish food, as well as lack of storage and handling facilities, all contributed to the scarcity of fish food. These results are consistent with certain earlier investigations (Heenatigala, 2007; Charo-karisa et al., 2014). The absence of government assistance and the lack of equipment for making fish food among fish farmers in the fishery supply chain are interesting aspects of this issue.

Conclusions and Recommendations

Conclusion

The goal of the study was to gain a deeper knowledge of the scarcity in obtaining fresh fish food across the Tanzanian fishing supply chain at Kola-Kisarawe. The study's specific goal was to explore the factors that contribute to a shortage of fresh fish food throughout the whole fishery supply chain. The research was organized around four main themes, including fresh fish feeding and financial support, fresh fish feeding formulation, fresh fish feeding network, and fresh fish feeding is related to knowledge and information. However, the preceding summary highlights the lack of fish food;

Accordingly, it becomes clear that a major shortage that fresh fish farmers face in the fishery business is a lack of funding, as well as the high cost of high-quality food, a lack of high-quality food, a lack of government financial support, and the absence of domestic industries that can be used to produce fish food. Fish farming is more difficult than it is beneficial due to the high quality of fish food, though.

According to the current situation, fish farmers are suffering from poor fresh fish feeding formulation, which was attributed to a lack of food formulation formulas, laboratories, adequate

information about food sources, experience, and knowledge, as well as unfavorable storage conditions for fish food. They must try to locate professionals to teach and sensitize the information and abilities about fish feeding and formula formulation. The scenario makes it difficult for farmers, especially traditional fish farmers, to develop fish formulas and locate trainers for them.

There are variables that prevented the network from receiving fish food in the setting of the scarcity of fish food. This proved that whereas old fish farmers struggled to find fish food, modern fish farmers continually have a network that could locate it. A lack of food, communication channels, and high food prices have all been proven by this scarcity, endangering Tanzania's traditional fish farmers' ability to purchase enough fish food.

Additionally, it should be highlighted that traditional fish farmers' ignorance and lack of information contributed to the shortage of fish food. On the one hand, increased freight costs for sourcing and transporting food from suppliers had an impact on contemporary fish producers. Poor government assistance for both modern and traditional fish producers contributed to this as well. Inadequate handling and storage facilities were also found, which negatively impacted the ability of fish farms to feed a variety of fish. As a result, the same account demonstrates that inadequate packaging and handling facilities can seriously impair fish feeding.

Recommendations

The study offers recommendations for reducing fish food scarcity throughout the fishery supply chain.

One, there should be involvement from all parties in the distribution of financial aid to fish producers. This can be accomplished by providing grants or soft loans that could assist with the purchase of packaging equipment and a range of foods. However, a number of parties, including the government, should spend money installing cutting-edge equipment and instruments to produce fish food. By registering both modern and traditional fish farmers to use contemporary machinery for creating or making fish food internally, this element can be improved. Furthermore, interested parties, such as the government, should take the time to visit fresh fish farmers in order to observe the kinds of foods used to feed different fish species and other practices related to fish farming.

Second, training and advocacy on the best techniques for designing and forming fish formula, gradients, and quality of food should be offered by stakeholders in order to improve fish feeding formulation and network. Similar to this, different parties may make promises to traditional fish farmers on the provision of relevant skills related to producing fish food as well as the allocation of equipment and tools to help them manufacture fish food on-site. Moreover, fish farmers may find greater markets after harvesting and selling fish goods.

The government should reduce the freight rate, levies, and transportation costs associated with importing fish food in order to increase knowledge and information and to encourage fish farmers to purchase sufficient fish food from abroad. This method can be successful if the government works closely with farmers, invests heavily through the provision of necessary facilities, and creates new companies at home to produce fish food.

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Towards development of an assessment model for users' satisfaction with Information Systems implementations in Tanzanian higher education context

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Abstract

Finding out the factors which can be considered for assessment of user's satisfaction with the ISs implemented in Tanzanian HEIs context. This study employed qualitative methods whereby both observation, semi- structured and unstructured interviews were involved. One purposely selected Tanzanian HEI was involved whereby selection of the participants involved both purposive and random selection techniques. The obtained data were thematically analysed and six themes were formed. The results yielded six themes which presented the factors noted as important on assessing users' satisfaction with ISs in Tanzanian HEIs context. The factors include: Implementation process, Information quality, Ease of use, Ease of learning, Experts support and System quality. The noted factors were also used to propose an assessment model which can later be tested for its applicability. The study one Tanzanian HEI and only qualitative methods have been used. More studies are invited to prove that findings and also more HEIs may be involved. Other methods can also be involved to improve the findings. The results from this study may guide the Tanzanian HEIs on assessment of user's satisfaction on the ISs implementation process to minimize project failure rate. Based on the noted difficulties on the implementation of ISs in the Tanzanian HEIs context, this study is found to be important on finding out a better way of assessing users satisfaction with the implemented ISs in Tanzanian HEIs. The study contributes to the body of knowledge necessary factors to consider on assessing users satisfaction with IS implementation in Tanzanian HEIs context for projects failure risks minimization. The study also contributed a proposed assessment model.

Keywords: information systems, ICT, higher education, users satisfaction, Tanzania

Introduction

Introduction of the Problem

The use of Information and Communication Technology (ICT) is considered crucial in every business organization in the world (Bilan, Mishchuk, Samoliuk & Grishnova, 2019). ICT is known on simplification of work and improvement of performance in the organizations (Matimbwa & Masue, 2019; Ko, Kim & Kim, 2021). The use of ICT in the developing countries like Tanzania has encountered a lot of challenges (Kavuta & Nyamanga, 2018) but still the countries may not run away for the use of it.

Tanzanian higher education institutions (HEIs) have also been in the front line on adoption of ICT in their different activities (Mtebe & Raphael, 2018; Mwandosya & Mbise, 2019; Magambo, Dida, & Kaijage, 2020). The use of information systems is now not a new phenomenon in this organizations. Different ISs have been adopted for efficiency improvement in different activities in these HEIs (Kisanjara, Tossy, Sife, & Msanjila, 2019; Mushi & Lashayo, 2022) though the implementation process has been a challenge based on the nature of Tanzanian HEIs operations (Kayanda, 2022; Kayanda, Busagala, Oyelere, & Tedre, 2022). Based on the noted difficulties on the implementation of ISs in the Tanzanian HEIs context, this study is found to be important on finding out a better way of ensuring users satisfaction with the implemented ISs in Tanzanian HEIs. The study explored the factors to consider on assessing users' satisfaction with IS implementation in Tanzanian HEIs context for failure risks minimization.

The Petter, DeLone and McLean (2013) IS success model mentioned users' satisfaction as an important factor on ensuring information systems implementation success; but it is not well known how better can users' satisfaction be assessed on ISs implementation in Tanzanian higher education context. To accomplish this study the following research questions were answered:

- 1) Which are the important factors on ensuring users satisfaction with ISs implementations in Tanzanian HEIs context?
- 2) How can the information systems in Tanzanian HEIs context be implemented to ensure users satisfaction?

Review of the Literature

According to Petter, DeLone and McLean (2013), Laumer, S., Maier, C., & Weitzel, T. (2017) and Kalankesh, Nasiry, Fein, & Damanabi, (2020) users' satisfaction is important for information systems implementation success. Pereira, de Carvalho & Rocha, (2021) explained that implementing information systems in HEIs is not an easy work which is also noted in Tanzanian HEIs context. Based on the challenges noted by Mfaume (2019), the implementation of information systems in Tanzanian HEIs can be more difficult and hence more measures to ensure successful implementation is important. Maheshwaran, Kumar, Rajeswari & Mungara, (2017) noted that development flexibility is necessary on ensuring users satisfaction though it is difficult to be attained. A study by Chaudhary, Hyde, & Rodger, (2017) explained that the effects of frequent changes on HEIs working protocols directly affect the systems implementation processes in HEIs which is also experienced in Tanzanian HEIs. It is evident that assessing users' satisfaction on IS implementation is important (Petter, DeLone & McLean, 2013), therefore knowing the best indicators of user's satisfaction with ISs implementation in Tanzanian HEIs context is important.

Different studies have been conducted on assessment of user's satisfaction with information system (Kalankesh, Nasiry, Fein, & Damanabi, 2020; Koh & Kan, 2020; Beatrix, 2022) though not in the ISs implementation in Tanzanian HEIs context and it is not known if the same applies. This study then aims on contributing to the body of knowledge by filling the noted gap.

Method

This study employed qualitative methods whereby both observation and unstructured interview were involved.

One purposely selected Tanzanian HEI was involved. The HEI was selected based on the ISs implementations processes taking place in this HEI (Creswell, 2013). Both purposive and random sampling were used on the selection of the interview participants of this study. The interview involved ten (10) lecturers and three (3) administrative staff.

The two methods were both used to ensure reliability and validity of the results by confirming the results of each other at different times during the research process. The results obtained from the interview were sometimes confirmed by observation and vice-versa. Validation of the results was also done by probing the questions several times in a different way to get the exact meaning

of what the respondent said. Both English and Kiswahili were used to get information from the participants.

The respondents in this study were anonymous presented in the data and participation to this study was voluntarily.

The collected data were analyzed thematically. The collected field notes were well arranged by first translating the kiswahili notes to english and thereafter place them in a well understandable order. The data collected from the interview were analysed separately from the observation ones. The analysis of data yielded 6 themes.

Results

The themes obtained from the analysis conducted are presented in table 1.

Table 1. Themes obtained and the observations made

Theme	Aspect	Observation
Development process	How can ISs be implemented for users' satisfaction?	It was observed that a proper selection of IS implementation process is important on fulfilling user requirements for users' satisfaction with the system
Information quality	Does the information provided by the ISs affect users' satisfaction?	It was observed that the outputs from the systems are very important for users' satisfaction with the IS
System quality	Is system quality important to these users?	It was observed that when users do not get what they expected from the system they were very disappointed and propose to go back to their previous working ways without ISs
Ease of use	How important is ease of ISs use to the user's	The researcher observed that the simplified operations in the ISs

	satisfaction?	helps to complete the activities with less mistakes and hence users become happier
Ease of learning	How important is ease of ISs learning to the user's satisfaction?	It was observed that complicated operations on ISs cause difficulties on understanding the systems and make users fail to operate the system correctly and therefore poor outputs and outcomes
Expert support	How important is expert support to the user's satisfaction?	The observation noted that poor experts support during implementation of ISs leads to difficulties on performing daily activities and therefore users found the system not reliable

Discussion

Discussion of the findings

To answer both questions of this study the obtained themes are explained. The obtained themes highlight the factors on ensuring users satisfaction with ISs implementations in Tanzanian HEIs context. Explaining these factors helps on showing how the ISs in Tanzanian HEIs can be implemented. From the findings of this study, the obtained factors to be considered on assessing users' satisfaction with the ISs in Tanzanian HEIs context are:

- 1) Implementation process
- 2) System quality
- 3) Information quality
- 4) Ease of use
- 5) Ease of learning

6) Expert support

Implementation process

The study found that users like the systems which relates to their environments and not systems adopted from some other institutions. The development process of information systems should ensure that users are aware of what is going on so as to increase their satisfaction with the system which was also noted by Maheshwaran, Kumar, Rajeswari & Mungara, (2017). A respondent said: *“We should have systems that relates to our environments ... we should be well involved on the development process ...”*. Another respondent said: *“Developing our own systems has helped a lot ... most of the things can be added when we request ...”*

It was observed that involving users into systems development activities improves the sense of ownership. The adoption of off-the-shelf systems was noted to cause difficulties on fulfilling users’ tasks due to difference on operations in the HEIs.

It was also observed that users need to have their operations in the information system as they used to do in their manual ways and therefore, they should be involved in the creation of their systems.

System Quality

The quality of the implemented ISs was also noted to be important on ensuring users satisfaction in Tanzanian HEIs context same as it was noted by Koh & Kan (2020) and Beatrix (2022) in their studies. System quality increases users’ reliability to the system and enjoy the benefits of it and therefore increased satisfaction is expected. One of the respondents said: *“If the systems will do what I want I will really be happy...”*. Another one said: *“I think we should be asked to give opinions on how the features of the system work better to make use enjoy to use it ...”*

It was also observed that when users get things done as they expected they become more like the system which shows their satisfaction.

Information Quality

It was found that users expect correct and accurate information from information systems. The information used in decision making should be as correct as possible for better decision making. A respondent said: *“We expect these systems to give improve our report ... accuracy is*

important.” Another one said: *“When the system gives us a wrong information its boring ... sometimes it’s difficult to note the mistakes ...”*

It was observed that when users get incorrect information are disappointed and loose trust to the system. The findings of this study concur with Kalankesh, Nasiry, Fein, & Damanabi, (2020) that the quality of information is important on decision making and its quality is crucial for users’ satisfaction.

Ease of use

It was also found that users like systems which are friendly and easy to use on performing their daily activities which was also found by Kalankesh, Nasiry, Fein, & Damanabi, (2020). A difficult system make them spend a lot of time on accomplishing their tasks and hence boring and hence. A respondent said: *“A simple system is better... I can easily do my work alone in a short time. ... calling for support every time is boring as they usually come late...”*. Another respondent said: *“Things should be created in a simple way to use ... with easy-to-use system we will not disturb the experts every time.”*

It was observed that users enjoy to use the systems which are easy to complete their tasks. They like systems which are easy to follow on their own in a simple manner.

Ease of learning

The findings from this study showed that users like to use a system which is easy to learn which concurs with Kassim, Jailani, Hairuddin, & Zamzuri, (2012) who found that an easy to learn system influence users trust to the system which positively affect users satisfaction. Some respondents mentioned that if the system involves a lot of steps on performing activities becomes difficult to learn and hence tiresome. One respondent said: *“Some things needs a lot of procedures ... I forget every time. The systems should be made simple so that we understand easily.”* Another one said: *“I hate difficult things... these systems need to simplify our lives and not disturb us ...”*.

It was observed that users forget the long procedures easily and start to call for experts support. The simple system procedures were easy to follow and remember. A simple to learn system allow users to learn some features alone just by following the menus or reading the user manual.

Expert support

It was found that users are more satisfied when they get expert support on time. Most of the ISs users in Tanzanian HEIs context depends a lot on ISs experts on the proper use of the ISs. One of the respondents said: *“You know we are not very good in these technologies as you guys ... you must help as closely to simplify our lives ... ”* Another one said: *“ I don’t like when I am stack then I don’t get help on time... students are the ones suffering as they do not get services on time. It is really disturbing when I fail to help my students ...we better go manually. ”*

It was observed that supporting users on using the ISs implemented makes the happier and they will always rely on the IS to perform their daily activities. Reliability to the IS proves satisfaction with the IS as it seems to be helpful and satisfying users on doing their daily activities comfortably.

It was not surprising to observe that, though users complain about missing expert support, some of them are just lazy to learn new things and therefore most of the times they will need an expert to work for them.

Finally, the results obtained by this study are useful on assessing users satisfaction on ISs implementation in Tanzanian HEIs context for successful implementation. The obtained factors have been used to propose users satisfaction assessment model for ISs implementation in Tanzanian HEIs context. The model is presented by figure and can be tested by other studies for its applicability.

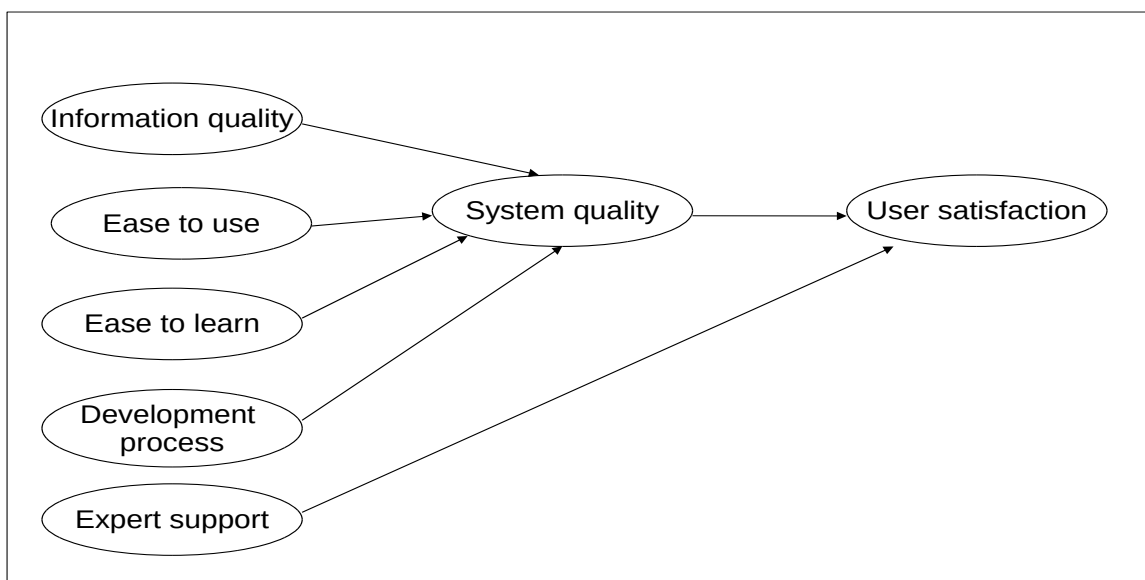


Figure 1. A proposed users satisfaction assessment model for ISs implementation in Tanzanian HEIs context.

Conclusion

The study explored the factors that can be considered on assessing users satisfaction in the implementation of ISs in Tanzanian HEIs context. It was noted that users in developing countries like Tanzania needs extra care on making the enjoy the benefits of the ISs implemented in their HEI. Most of the users from these countries are yet not very competent on technologies and therefore extra care is required which is also noted in Tanzanian HEIs context. The developers needs to be very patient as most of the users will need frequent assistance.

The study involved only one Tanzanian HEI and therefore more studies are invited which may involve more HEIs from Tanzania. The highlighted factors can be more researched using other methods like survey to confirm their applicability.

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Intricacies Of Managing Enterprise Mobility In Higher Learning In Institutions In Tanzania

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Abstract

Ever growing trend in terms of user demands, business complexity, new applications and services in higher learning institutions calls for businesses and service providers to offer remote working options that are affordable and flexible. This, in turn, necessitates extensive use of personal laptops and mobile devices for academic and other business purposes and the use of cloud technology for data access. Enterprise mobility is a commonly used approach to work in which students and employees can do their jobs from anywhere using a variety of devices and applications. Enterprise mobility, specifically, involves the use of mobile devices, wireless networks, and other mobile computing services in a business context. There are, however, several risks and challenges facing Enterprise mobility management some of which are posed by device diversity, some by data breach, some by the age of devices, some by hyper connectivity and some by malicious Apps just to mention a few. Qualitative approach was adopted in collecting primary data on risks and challenges involved in enterprise mobility management. This study aims at investigating the intricacies of managing Enterprise Mobility in Higher Learning in Institutions in Tanzania. Findings from this study will help higher learning institutions in identifying the drivers for mobility and benefits in its adoption, illustrating the success of mobility strategy, revealing key challenges to implementation, and providing a framework for creating their own mobility strategy.

Keyword: Enterprise mobility, mobile devices, Higher Learning Institutions

Introduction

Enterprise mobility (EM) may loosely be defined as a strategy through which people undertake their work-related duties and responsibilities from anywhere using a variety of portable computing devices and applications over the Internet connectivity (Sørensen, 2022). Wireless technologies and mobile Apps are the major enablers for enterprise mobility. Students in higher

learning institutions are commonly using mobile devices and mobile Apps to access digital learning content; exams, tests and quizzes; communicating with lecturers, intercommunicating amongst their peers; recreational content; banking and other financial services; and sharing various content, to say the least. On the other hand, Academic, administrative and technical staff also use mobile devices and mobile Apps to facilitate their day to day work related activities. Unlike in traditional face to face academic environment whereby a learner and the instructor are compelled to be physically present at one place, enterprise mobility offers a variety of options for enabling students and staff to access academic resources, research dataset and other related information systems remotely from anywhere and at any time.

Much as enterprise mobility plays a pivotal role in simplifying the teaching, learning and administrative processes in HLIs its dynamics and complexity poses risks and challenges that need to be properly managed and controlled to ensure efficiency and effectiveness. Essentially, the foundation of enterprise mobility is built upon three pillars namely mobile devices, mobile applications, and digital content. If these pillars of EM are coherently managed, the resulting synergy will bring up enormous benefits in attaining the highest degree of academic and research excellence in higher learning institutions. Thus, enterprise mobility management in this context refers to a coordinated team of people, processes and technology in a manner that seamlessly facilitate remote access to digital resources (Journal & Engineering, 2017). Thus, this paper, investigates the intricacies of managing enterprise mobility in the context of higher learning institutions covering portable computing devices, mobile apps, wireless networks, and other mobile computing facilities in higher learning institutions in Tanzania to facilitate teaching and learning activities.

Literature Review

Enterprise Mobility Management (EMM) comprises of three key elements namely Mobile Device Management (MDM), Mobile Application Management (MAM) and Mobile Content Management (MCM). Taken together the three elements result into a comprehensive Enterprise Mobility Management (EMM) framework. Figure 1 illustrate a more detailed EMM.

Enterprise Mobility Management (EMM)

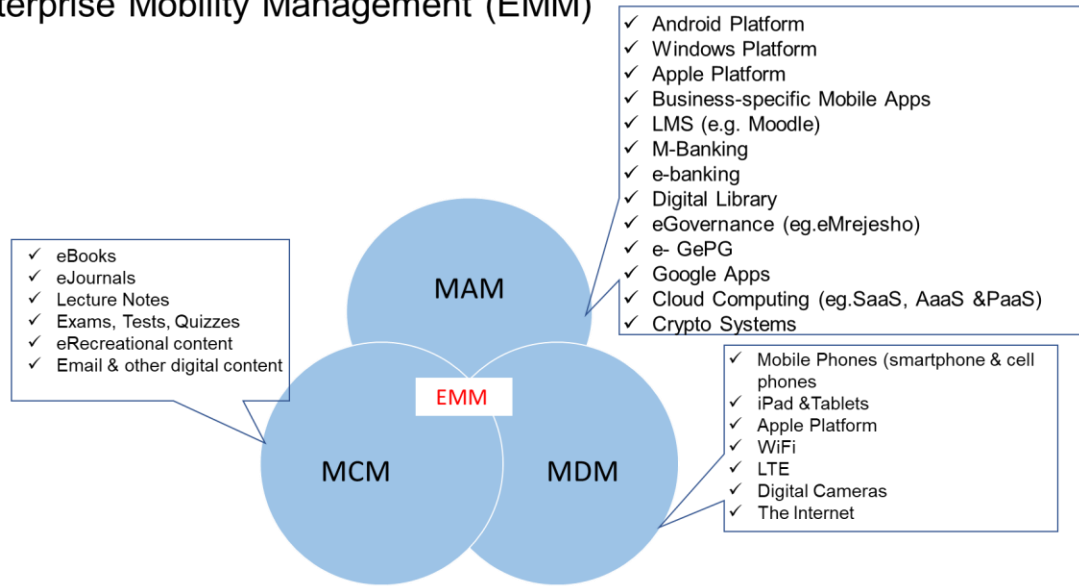


Figure 1: Enterprise Mobility Management (EMM) Key Elements

Wireless Communication

Wireless communication literally refers to any sort of signal transmissions that occurs without the use of a cable or wire, hence the name wireless. It is one of the most important media of transmission of data from one device to another or from one point to another without requiring any cable or other form of electronic conductors. It makes use of electromagnetic waves like radio frequency (RF), Bluetooth, infrared (IR), satellite and the like.

Historically, the genesis of wireless communication networks can be traced way back in the 19th century the first telegraph was invented (Elpprocus, 2022). This was followed by the invention of the radio, the transoceanic communication, the voice over radio, the television transmissions, the mobile telephony, the cellular mobile, the wireless Internet and the Personal Communications Services (PCS) wireless. This was chronologically followed by the invention of the radio, the transoceanic communication, the voice over radio, the television transmissions, the mobile telephony, the cellular mobile, the wireless Internet and the Personal Communications Services (PCS) wireless. The latter provides a wide range of wireless capabilities ranging from terminal mobility, personal mobility. There are numerous devices that uses wireless communication and technologies in today's business and social context. A non-exhaustive list of such devices includes smartphones, computers, tablets,

laptops, Bluetooth Technology, printers, smartwatches, remote controls, mice, microphones, speakers, automatic doors, keyboards, wireless routers, cordless phones, key card door lock system, and GPS system, just to mention a few. These and other wireless communication technologies play a central role in facilitating enterprise mobility capabilities.

Types of Wireless Communication

Innovation and invention in wireless communication technologies is an ongoing and endless endeavor. New and advance wireless communication solutions are brought into being nearly on daily basis. Enterprise mobility is, therefore, enabled by different types of wireless communication technologies each offering a variety of communication services. This section presents and the types of wireless technologies and their application in enabling enterprise mobility. Figure 1 illustrates the different types of wireless technology devices.



Figure 2: Wireless Technology Devices [Source: Sørensen, C. (2022)]

Broadcast Radio Communication

Broadcast radio is probably the most commonly used wireless communication technology worldwide. It involves transmission of audio by means of radio waves to radio receivers in the to a public domain. Radio waves propagate in the form of electromagnetic signals to facilitate enterprise mobility.

Microwave Communication

Microwave communication refers to the type of transmission of signals by means of microwaves directly or via a satellite. They are commonly used for point-to-point communication. Microwave technologies require presence of a clear line of sight to function. Essentially, microwave communication technology is in twofold namely satellite microwave communication and terrestrial microwave communication (Mao, 2021).

Satellite Communication

Satellite communication is a wireless communication technology that provides communication between widely separated geographical points. It mainly uses a wide range of radio and microwave frequencies to carrying communication signals including voice, video, and data to and from one or many locations worldwide. Some of the advantages of satellite communication include covering over a much bigger geographical areas with rough terrains, poorly connected areas and places where it is difficult to lay cables, it also, provides high bandwidth at relatively lower prices over longer distances. Despite the potentials of satellite communication, it also has inherent challenges including delay in propagation, noise interference and large initial cost.

Infrared Communication

Infrared communication (IR) transmits signals by means of invisible light on the range of the electromagnetic spectrum that lies between microwaves and visible light (Acunto et al., 2020). It is commonly used in a variety of home appliances such as television remote controls, thermal imaging cameras, electrical heaters, cookers, security systems and optical mice, just to mention a few. For the Infrared communication to function effectively it requires presence of a line of sight.

Wi-Fi Communication

Wireless Fidelity (Wi-Fi) is the most widely used wireless networking technology which is based on the IEEE 802.11 wireless standards. It allows various devices such as computers, video cameras, smartwatches, smartphones, tablets, and other mobile devices to interface with the Internet. Wi-Fi uses radio waves to enable high-speed data transfer

over short distances. It is commonly deployed in public places such as airports, shopping malls, markets recreational places and in residential areas.

Mobile Communication System

Mobile communication system is the one that allows people to intercommunicate without using any form of physical link, regardless of their geographical locations, time, and distance between them (Mitra, 2018). It involves various mobile systems technologies such as Global Systems for Mobile (GSM), Code Division Multiple Access (CDMA), Universal Mobile Telecommunication System (UMTS), Long Term Evolution (LTE).

Bluetooth Technology

Bluetooth is a wireless communication technology which allows devices to send data across a short distance. Bluetooth technology devices use electromagnetic ultra-high frequency (UHF) radio waves with frequencies around 2.4 gigahertz (Tsira & Nandi, 2014). These are waves. Its main downside is that it has a maximum reach of 30 feet. Typical Bluetooth technology devices include computers, smartphones, cell phones and smartwatches.

Mobile Apps

Mobile applications which are commonly referred to as Mobile Apps are small software applications specifically designed to run on mobile devices such as laptops, smartphone, tablets or smartwatches. Some of the mobile apps are powered by Apple software and these can easily be downloaded from App Store and installed in iPhone, iPad and iPod Touch. The other categories of Mobile Apps are android based and these are readily available in play store. Mobile apps might be categorized in gaming apps, productivity apps and recreational or entertainment apps.

Methodology

This study employed survey research methodology (Showkat & Parveen, 2017). Specifically, qualitative research strategies using open-ended questions and in-depth interviews whereby key informants were asked questions in one-on-one conversations. Other methods used in this study were observations by recording what were seen or encountered in detailed field notes and focus groups discussions by asking questions and

generating discussion among a group of people. The respondents were drawn from several higher learning institutions including the College of Business Education (CBE), the Institute of Social Works (ISW), The institute of Finance Management (IFM), The University of Dar es Salaam and the Dar es Salaam Institute of Technology (DIT). The survey involved 142 respondents whereby 23 respondents were involved in Focus group discussions, 18 respondents were interviewed and 101 respondents gave their inputs through an online Questionnaire.

Findings and Discussion

Research tools were technically designed to probe the respondents on the use, benefits, risks and challenges of enterprise mobility management from the perspective of higher learning institutions. Respondents were also prompted to provide their candid opinion of the ways and approaches for managing enterprise mobility effectively and in a cost-effective manner. Presented hereunder are the key findings from the survey.

Security

Over 93% of the respondents expressed their concerns on the security of the data and information that are shared mobile devices and mobile apps arguing that they have no absolute assurance that data are not accessed in any ways by the third party. On the other hand, 79.2% of the respondents reaffirmed that security is critically important in wireless networks because data is transmitted therein using radio signals without implementing relevant crypto systems or data encryption mechanisms, thus they can easily be intercepted attackers. Some security concerns were also raised on the use of freely downloadable mobile apps. Most the respondents 86% questioned on the security of the freely downloadable mobile app from Apple store and Play store as the case may be. There were some strong feelings from nearly 74% of the respondents that the freely downloadable mobile apps might have inherent backdoors which may eventually lead into information and identity theft. Other respondents 65% were skeptical in using the free mobile apps fearing of the risks of encountering some malicious codes therein.

Privacy

Some of the respondents 59% had little confidence in using mobile apps fearing of infringement of their privacy online. Privacy in this context refers to the claim of

individuals, groups and institutions to determine for themselves, when, how and to what extent information about them is communicated to others (Westin, 1968).

Perceived Benefits of Enterprise Mobility

A large proportion of the respondents 97.5% singled out work and study flexibility as the most outstanding benefit of enterprise mobility whereby students can easily access digital learning resources synchronously as well as asynchronously using mobile devices and mobile apps regardless of one's geographical location. Cost-effectiveness was also highlighted by 84% of the respondents as one of the key benefits of enterprise mobility. Cost-effectiveness was primarily attributed to the relatively lower prices for the mobile devices, bandwidth, mobile apps and zero travel cost. Another aspect which was mentioned as a benefit of enterprise mobility was on work-life balance where by one is not compelled to be at the College or at work place to execute assigned duties and responsibilities at hand. Enhanced intercommunication within the community was mentioned by 92% of the respondents as one of the benefits of enterprise mobility. Improved productivity was also highlighted by nearly 78% of the respondents as a key benefit of enterprise mobility whereby one can attend work or academic related activities during travels and transits resulting into enhanced productivity.

Perceived challenges of Enterprise Mobility

The need for technical know-how was the most outstanding challenge mentioned by nearly 95% of the respondents. They argued that enterprise mobility to be a success, there must compete IT professional for designing, developing, implementing, maintaining and securing both the mobile devices and mobile apps. They, further, argued that competent IT professionals are quite slippery simply because they are on high demand in the industry. Another challenge that came up vividly was on fastness in the change of digital tools and mobile device technologies which was cited by nearly 88% of the respondents. These technologies evolving at a tremendous speed and that before you realize they become obsolete. Initial costs for developing of enterprise mobile apps were, to the majority of the respondents 77%, considered as too high leading into some enterprises delaying in executing their mobility plans and strategies.

Conclusion and Recommendations

This paper provides an overview of enterprise mobility management together with a comprehensive survey of the benefits and challenges mobile devices and mobile apps which are the major enablers of enterprise mobility management. A multitude of information is transmitted, processed, and stored in mobile devices and mobile apps at any given moment. Some of such information are implicitly or explicitly classified as confidential or sensitive. In either case, individuals as well as enterprises need to put in place a thought through enterprise mobility plan and strategies that is capable of overcoming the inherent mobility challenges. The value that is achieved by successfully maintaining the confidentiality of personal, student, staff, and any other bona fide third party who might be involved in dealing with information transmitted over a wireless network is enormous.

From the facts on the ground it is evident that the use of mobile devices and mobile apps for transmitting, processing and storing data and information is inevitable. Meanwhile, mobile devices security is increasingly becoming a critical challenge. Therefore, it is recommended that enterprises should devise comprehensive plans and strategies for increased device security, when adopting mobility.

Since from this study, the benefits of enterprise mobility apparently outweigh its drawbacks, it is recommended that every organisation is urged to develop its own enterprise mobility plan and strategy. Ultimately, this will help an organisation to create a secure, scalable, and enterprise mobility-ready architecture that puts the user experience and requirements first.

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Implications of the Fourth Industrial Revolution in Business: A Case of Selected Service Industries

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Abstract

This paper analyses how the fourth industrial revolution (4IR) reveals a fundamental shift in business processes. The paper discusses some of the developments of the 4IR and assigns these developments to some business areas: Marketing, Accounting, Finance, Tourism, Sport and Transport. The first three areas have been selected as core business areas, while the last three are equally old but have experienced a particular upsurge in recent years. The term 4IR describes the blurring of boundaries between the physical, digital and biological worlds through the combination of artificial intelligence, robotics, the Internet of Things, 3D printing, genetic engineering, quantum computing and other technologies. Specifically, this paper is about reviewing the developments of the industrial revolution and outlining their impact on the economy.

Keyword: *Fourth industrial revolution, Business education, Service industry*

Introduction

In recent decades, technological progress has brought about remarkable and important changes in the world. Through a series of revolutions and technological advances over the years, the Fourth Industrial Revolution (4IR) has had a significant impact on individuals, economies and countries around the world. The 4IR and its accompanying innovations have turned the world upside down and are the talk of the town. The 4IR has changed the way we live, work and even interact. This extraordinary development has been made possible by harnessing technological advantages that rival the three previous industrial revolutions. Economic, social and cultural upheavals of such

spectacular magnitude are being triggered by the scope and scale of the technological revolution currently underway

The term 4IR refers to a radical shift in the interaction between biological, physical and digital elements, enabling real-time connectivity between products, production facilities, people and smart devices (Gadekar, Sarkar, & Gadekar, 2022; Obermayer, Csizmadia, & Hargitai, 2022; Silvestri, Forcina, Introna, Santolamazza, & Cesarotti, 2020). The 4IR relies on several technological developments, including the Internet of Things, 3D printing and others. The pace and scope of this revolution is high, with limitless potential in a variety of areas, including but not limited to quantum computing, robotics, the Internet of Things (IoT), nanotechnology, genome sequencing, quantum computing, 3D printing, nanotechnology and biotechnology. Other areas include energy storage, autonomous vehicles, materials science and artificial intelligence. The inventions are still at an early stage of development, but they build on and reinforce each other in a convergence of technologies from the biological, digital and physical worlds and are approaching a tipping point in their growth.

All sectors of the economy are undergoing profound change, as evidenced by the emergence of new business models, the demise of market leaders and the transformation of systems for production, consumption, transport and delivery. At the societal level, there is a paradigm shift in the way we live, work, express ourselves, educate ourselves and enjoy ourselves. Governments and institutions as well as financial institutions and systems are all undergoing change at the same time. The potential to support the regeneration and conservation of natural habitats through the use of new technological methods also offers the opportunity to avoid hidden costs in the form of externalities.

Due to the changes in business practises brought about by the development of 4IR, companies need to realign their current business practises to adapt to these technological developments. The changes in current business practises will make some professionals redundant. Therefore, they will need to have a high level of knowledge and technological skills to work in a 4IR environment (Kurt, 2019). 4IR affects all professions in business sectors (Stancheva-Todorova, 2019; Karmanska, 2021).

The aim of this paper is to discuss developments in 4IR. Specifically, six sectors are considered: Accounting, Finance, Marketing, Tourism, Sport and Transport. The paper also acknowledges the contribution of 4IR in other sectors (Mbamba, 2022a; Mbamba, 2022b).

Historical context

Revolution is a term used to describe sudden, dramatic changes and extreme upheavals that have occurred throughout history when new technologies and inventive ways of looking at the world led to significant changes in social and economic institutions. About 10,000 years ago, the domestication of animals enabled the first significant change in human culture, namely the transition from foraging to agriculture. With the aim of production, transport and communication, the agricultural revolution united the activities of humans and animals. Food production gradually increased, which fuelled population growth and enabled larger human settlements. This eventually led to urbanisation and the growth of cities. The Industrial Revolution is characterised by technological, socio-economic and cultural changes (Schwab, 2016).

First Industrial Revolution

The first industrial revolution began in the mid-eighteenth to mid-nineteenth centuries. It was characterised by the transition from manual labour to simple machines and the improvement of water energy in the form of steam and water power. It was also an era in which iron technology and new manufacturing methods took hold. It was driven by infrastructures such as the invention of the steam engine and the building of railways, heralding production through mechanical machinery (Schwab, 2016). The construction of railways and the development of the steam engine acted as catalysts. Production now became mechanical.

Second Industrial Revolution

The second industrial revolution began in the mid-nineteenth to early twentieth century with the development of electricity and the assembly line, which made mass production possible. This era was characterised by an increase in productivity and an improvement in product quality. It was the beginning of inventions such as sustainable energy sources, medicine, chemicals and various materials. Mass production of products also enabled economic scale and was driven by the remarkable arrival of electricity.

Third Industrial Revolution

This era began in the middle of the twentieth century and lasted until the beginning of the twenty-first century. It is the time when digital innovation underwent a tremendous revolution through the existence of semiconductors, mainframes, personal computers and the Internet. The digital revolution served as the basis for the current fourth industrial revolution, which began at the turn of the century.

Fourth Generation Industrial Revolution

Digital technologies, essentially based on computer hardware, software and networks, are not new, but unlike the third industrial revolution, they are evolving and becoming more integrated, transforming society and the global economy.

The framework of 4IR is not only the maximisation of the support process through information technology, but also a self-organised value network that manages economic interactions. Digitalisation also offers the opportunity to create new business models by leading to new innovations in products and services. The 4IR will have a major impact on current business processes. It is estimated that more than half of today's work will disappear and be replaced by advanced technologies and systems (Pauceanu, Rabie, & Moustafa, 2020).

While the second industrial revolution reduced the number of blue collar workers, the 4IR will reduce even white collar managers.

Drivers of the 4IR

4IR uses a range of enabling technologies such as advanced manufacturing solutions, augmented reality, Internet of Things, Big Data analytics, cloud computing, cybersecurity, additive manufacturing, simulation, horizontal and vertical integration and other enabling technologies (Rüßmann, et al., 2015).

The Blockchain Technology

Blockchain technology is a chain of digital blocks containing organisational information that is very difficult to change. The sender, the recipient and the transaction are all contained in digital blocks of information. The data is reliable because it is bound within a strict framework of rules and cryptographic keys. Blockchain technology is a secure protocol, often called a distributed

ledger, that uses a network of computers to verify transactions before they are recorded and approved. Blockchain has been called one of the pillars of the 4IR. Blockchain eliminates the need for a central authority to act as a trust authority, resulting in faster transaction times and a reduction in transaction costs. Trust between participants is ensured through cryptography. The security of transactions is guaranteed because the information contained in a blockchain is incontestable. Attempting to change a transaction in a block would require changing the hash value of that block, which takes a lot of time and computing power. The absence of a central authority creates an independent peer-to-peer network that regulates itself.

Deloitte predicts that nearly four-fifths of executives believe blockchain technology will eventually become mainstream. In addition, nearly two-fifths of executives from around the world said they have adopted blockchain technologies in their organisations. Moreover, the adoption of blockchain as a top strategic priority is strongest in China, where nearly three-quarters of respondents agreed that blockchain is one of their company's top five priorities. On the other hand, two-fifths of companies in Germany see Blockchain as a priority. Finally, the top use cases for Blockchain in companies worldwide are digital currencies, data access and exchange, and data reconciliation (Pawczuk, Holdowsky, Massey, & Hansen, 2020).

Big Data Analytics

Big Data analytics involves sifting through vast amounts of data to find important information for decision-making. Big Data analytics provides valuable information about key elements such as markets or business directions, showing which ones will potentially yield the highest profits. It is important for strategic decisions such as expansion and development plans or financial analyses. It has therefore become an important source for the service sector. Big Data analytics help in service improvement, performance measurement and smart maintenance.

Table 1 summarizes the potential of Big Data analytics. From the data is clear that the big data analytics still growing.

General statistics

1. companies generate about 2,000,000,000,000,000 bytes of data every day
2. 94% of companies say data is essential for business growth
3. 63% of companies fail to gain insights from Big Data

4. 73% of data is not used for analytics
5. the biggest problem with accessing data is IT budget constraints
6. 36% of companies rank Big Data as critical to business operations

Use cases for data

7. Banking and manufacturing are the top industries for Big Data
8. The US is the largest market for Big Data
9. Bad data costs the US \$3.1 trillion per year
10. Data warehouse automation is one of the top use cases for Big Data
11. The market for Big Data analytics in healthcare is growing

Benefits of Big Data

12. Data-driven companies are 23 times more likely to win customers
13. Data enables better decision-making
14. 79% of companies believe that not using Big Data will lead to bankruptcy
15. A 10% increase in data transparency could lead to \$65 million in additional revenue
16. Companies that use Big Data could increase their operating margins by 60%

Big Data trends

17. Each person will generate about 1.7 megabytes of data per second in 2020
18. Data collected globally is expected to reach 44 zettabytes in 2020
19. It would take 181 million years to download all the data from the internet
20. 97.2% of companies are now investing in AI and Big Data
21. The IoT is driving data growth

Source (Carter, 2021)

Artificial Intelligence

Artificial intelligence is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings, such as the ability to reason, recognise meaning, generalise, or learn from past experience (Razali, Jusoh, Abu Talib, & Awang, 2022). Artificial intelligence is one of the key drivers of 4IR. This means that a computer can mimic human behaviour in decision-making, such as problem optimisation, pricing strategies, message automation and automatic responses, and security and maintenance procedures

Artificial intelligence is now replacing tasks that used to be done by humans, and this will lead to major problems in the labour market (De Villiers, 2021). Based on 4,519 publications from 2000 to 2019 (Chen, Zou, Xie, Cheng, & Liu, 2022), it showed that interest in the use of artificial intelligence is increasing. Key research topics in education included intelligent tutoring systems for special education, natural language processing for language teaching, educational robots for artificial intelligence teaching, data mining in education for performance prediction, discourse analysis in computer-supported collaborative learning, neural networks for teaching evaluation, affective computing for learner emotion recognition, and recommendation systems for personalised learning.

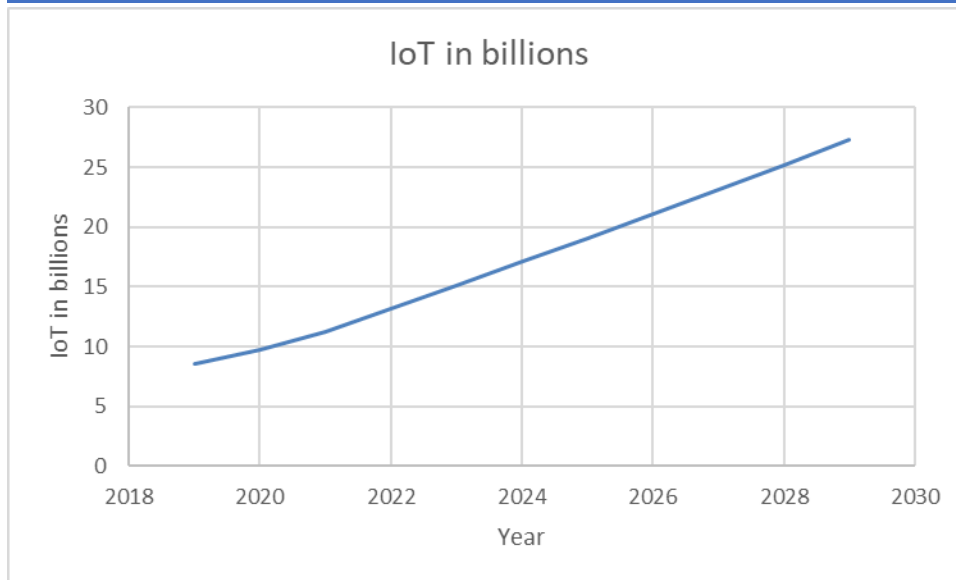
The Internet of Things

The Internet of Things is defined as a network of connected devices and the technology that enables communication between devices and the cloud or the system and the devices. The Internet of Things is a relationship between things (products, services, places, etc.) and people enabled by networked technologies and various platforms. It also describes a set of tools that can be used in daily life to track the physical location and state of users. Since the 1990s, computer engineers have been working to equip everyday objects with sensors and processors, but progress has been slow due to the size and bulkiness of chips. Chips are getting smaller, faster and smarter over time as computing devices get smaller.

The Internet of Things is the key aspect of the 4IR, where networked computers and devices communicate with each other and automate processes without human intervention. With faster connectivity, the Internet of Things has changed many aspects of business operations. The Internet of Things has also contributed to customer service, for example in air travel, where the Internet of Things tags passengers' luggage. Electronic luggage tags and sensors to track luggage. This helps track the location of luggage and minimise theft as luggage can be easily traced.

It is estimated that the number of objects/people connected via the Internet of Things is over one trillion and will increase significantly in the coming years as shown in Figure 1.

Figure 1: Growth of Internet of Things



Sources: Stastica (2022)

3D Printing

3D printing transforms a digital 3D model or drawing into a real object by printing successive layers of the model or image. In the manufacturing method used so far, known as subtractive manufacturing, a piece of material is layered until the desired shape is achieved. In contrast, 3D printing starts with loose material and uses a digital template to shape an object into a three-dimensional form. 3D-printed objects are highly customisable, unlike traditional mass-produced products. It is expected that 3D printing will be used to produce human cells and organs in the future.

It is estimated that the 3D printing market will grow from \$12.6 billion in 2021 to \$34.8 billion in 2026 (MarketsandMarkets, 2021). However, Errera (2022) noted that the global 3D printing market reached \$13.8 billion in 2021, while the North American 3D printing market was \$5.72 billion in the same year. Errera (2022) also predicted that the 3D printing industry will grow between 18% and 27% annually and that approximately 2.2 million 3D printers will be shipped in 2021. From the same article, the advantages of 3D printing over other production methods, the superior ability to create complex geometric objects, the rapid iteration of products and the possibility of mass customisation are important.

Robots

Robotics is the branch of engineering that deals with the design, construction, operation and application of robots. A robot is a machine that resembles a human being and is capable of replicating certain human movements and functions automatically. In the past, robotics was only used for highly regulated tasks in some industries, such as the automotive industry. Today, however, robots are increasingly used in all industries and for a wide range of tasks, from precision agriculture to nursing. Robots can now perform a wider range of tasks, including household tasks, and connect to a network of other robots. Sales of professional service robots increased by 37%, with the strongest growth coming from Europe with a 38% market share, followed by North America with 32% and Asia with 30% (IFR, 2022).

Cloud Computing

Cloud computing technology allows organisational users to access storage, files, software and servers by connecting their internet-connected devices such as computers, smartphones and tablets (Marinescu, 2022). Cloud computing providers shop and process data in a different area or location than end users. The growth of cloud computing facilitates business agility, global access to information technology infrastructures, cost efficiency, improved innovation and competition, and growth and employment (Pal, 2022).

Other Technologies

Genetic engineering is the process of using recombinant DNA (rDNA) to modify the genetic material of an organism. Augmented reality and virtual reality, technologies that use informatics to connect the real and digital worlds, enrich the visual experience of users and consumers by creating immersive experiences.

Impact of 4IR is Various Service Sectors

Impact of 4IR in Marketing

In the field of marketing, 4IR has brought about a great change over time, bringing about efficiency and effectiveness to some extent for companies and marketing firms. Companies need to go beyond marketing and sales arrangements and understand the mix of approaches to be more effective. 4IR forces companies to look not only at the individual environment, but also at the online and offline worlds working together to achieve positive results (Schwab, 2016).

Marketing is a management process that involves identifying, anticipating and satisfying customer needs in order to make a profit. The 4IR has influenced the marketing revolution from Marketing 1.0 to Marketing 4.0. Marketing has evolved from the traditional product-oriented marketing concept to the new marketing that encompasses a social, virtual and business approach aimed at adding value to the marketing mix.

The 4IR will replace lower and middle management workers in numbers and eliminate repetitive tasks by automating even professional jobs such as accounting and financial analysts. While many companies have not disclosed certain information in marketing for some time, this will no longer be the case with the 4IR. The 4IR require heavy investment in the internet and security of data. Inadequate investment in security and data will increase inequality between individuals, organisations and nations. As data will be readily available, the issue of ethical use of data could be challenging. Marketers with the appropriate skills can thrive, while someone without them will perish. Marketing requires extensive knowledge of business, technology, communication, innovation, critical thinking, creativity and problem solving, which are important for survival in the marketing industry in the 4IR.

Impact of 4IR in Accounting

Technological progress has undoubtedly affected almost all professions, including accounting. For accounting, 4IR means that increasingly advanced systems are available to replace traditional manual processes and reduce the risk of misstatements and accounting errors. Accounting practises are shifting from manual to automated accounting practises as information technology advances, changing the role of accountants (Ghani & Muhammad, 2019). Therefore, traditional accounting practises, processes and techniques need to be readjusted to adapt to the 4IR business environment (Razali, Jusoh, Abu Talib, & Awang, 2022).

Accounting information is used for planning, economic analysis, auditing and the preparation of various forms of reporting. Different users of accounting information have different interests. There are indications that the 4IR has not displaced accountants, although their numbers may decline significantly, while accounting may become more broadly based. Information technology may completely change accounting, but in most cases the methods of collecting, recording, summarising, systematising and detailing information will remain unchanged, albeit highly automated. The role of auditors will increase as transparency increases, reducing the importance

of auditing as we do it today. The availability of blockchain technology will put an end to the informal economy.

The IoT and other technologies such as artificial intelligence and the cloud are helping accounting professionals make informed business decisions. IoT devices collect the real-time data and send it to the cloud servers for data analysis and process automation along with artificial intelligence. IoT devices such as smartphones automatically send updates about the latest tax laws or government reforms to the cloud, which can then be interpreted to make appropriate decisions

Accounting firms can use cloud computing services to access accounting information from a remote location using an internet-connected device and a cloud application provider that acts as cloud accounting software. Cloud computing will simplify accounting processes. When this technology is used, the security of storing confidential information improves, the delivery speed of accounting firms improves, the processing of small and large data becomes more efficient, and accountants or accounting firms gain time to focus on revenue-generating tasks rather than data entry and processing large amounts of data.

Cloud computing for accounting firms increases speed and enables rapid processing of information for clients while simplifying information sharing. Accounting firms can use invoicing and bookkeeping in the cloud to deliver online invoices and instalments, automatic updates and invoice receipts to their clients in a more productive and adaptable way

Accounting tasks such as payroll, tax, banking and audits are now being automated using artificial intelligence technologies that are reshaping the accounting industry and significantly changing the way business is done. Robotic process automation, which is part of artificial intelligence, can perform repetitive tasks in the company's business processes with amazing efficiency, including the analysis of documents or data. Robotic process automation allows the accounting team to focus more on strategic and advisory tasks. The technology processes documents in real time using natural language processing and computer vision to generate reports, also in real time. These reports provide insights and ensure that the company can be proactive and change course when necessary. The technology helps process and automatically authorise documents to improve internal accounting processes such as procurement and purchasing, invoicing, purchase orders, expense reports, accounts payable and accounts

receivable. It supports auditing and compliance with corporate, state and federal regulations by monitoring relevant documents and issuing alerts as needed.

Blockchain technology has already been used for cryptocurrencies such as Bitcoin, but many other business sectors such as energy markets, supply chains, digital identities, financial markets and healthcare services are beginning to use the technology. The technology is expected to be the next incredible innovation that will revolutionise accounting and auditing by making the recording of transactions in a distributed ledger cheaper, more reliable and more accurate. When a new transaction is initiated, all participants in this network, who have an identical copy and real-time access to the ledger, communicate with each other and verify the validity of the transaction before it is entered into the blockchain. Once the transaction is entered, it is encrypted and cannot be easily deleted or modified

In the 4IR, outsourcing of accounting firms can be replaced by the purchase of accounting software that can take over almost all the tasks of outsourced accounting firms. The accounting software as a technology is used as a digital ledger so that the transactions of buyers and sellers can be recorded in real time in a single system by all parties involved in the transaction.

All in all, the 4IR allows for quick access to data, improved accounting reporting, increased credibility of data (no more cosmetic accounting), elimination of repetitive tasks, reduction of accounting employment opportunities (Pauceanu, Rabie, & Moustafa, 2020) and reduced regulation.

Impact of 4IR on Financial Sector

The consumption of services, unlike the consumption of goods, is not subject to restrictions. In earlier periods, the consumption of services and the growth of their variety were constrained by the local nature of their consumption and the locality of their supply due to demand constraints below the effective level. The industrial revolutions, particularly the 4IR, have transformed the nature of service production and delivery by introducing entirely new technologies and platforms for service delivery, providing digital formats for service delivery, cutting out middlemen, revising the principles of interaction with customers, suppliers and partners, creating the possibility of creating ecosystems, connecting to partner and contractor infrastructure and providing new payment systems/flows.

The financial system, which provides many forms of financing through various forms of loans, instruments, financial products and services, also includes financial services. The financial sector is an ever-changing and growing industry with increasing demand for its products and services. Therefore, large companies in the financial sector are constantly working to evolve and change in order to stay ahead of their competitors (Machkour & Abriane, 2020). Taking banks as an example, we can say that they first competed with ATMs, followed by phone banking, internet banking and later by mobile applications. Over time, most banks are rushing into modern systems that will transform the delivery of financial products and services through digital platforms (Machkour & Abriane, 2020). Just as the introduction of the internet in the late 1990s marked the beginning of the realisation of financial transactions, the advent of the smartphone is the true acceleration of constant access to the internet.

Since the 4IR, various changes have taken place. This digital transformation has enabled the emergence of various products and services in the economy at large, so the financial services industry has shown a great impact on its R&D spending

To analyse information and intelligently connect a large number of people, devices and systems, hyper-connected networks also rely on an architecture of networks and IoT. These innovations are driving connectivity and processing faster than ever before, enabling interactions between autonomous systems and humans. ATMs, trade finance, insurance, and accounting and auditing are some examples of IoT applications by financial service providers.

Blockchain is an innovative financial services company that is revolutionising the world of finance. One of the biggest potentials for banks and other financial companies today is widely seen in blockchain, the technology that powers Bitcoin and has been adopted by major banks in advanced economies.

With tools to automate certain operations such as documentation, data exchange and analysis, customer communication and much more, these breakthrough innovations in the financial services sector are easily accessible to smaller banks. As part of the digital transformation of banks and other financial services, chatbots and other machine learning technologies are becoming increasingly popular among financial firms of all sizes. Artificial intelligence is impacting management, product delivery, risk identification and assessment, sales and marketing, and security, with chatbots being the most well-known application. For leading

financial institutions and banks, machines do it all with simple techniques, saving hundreds of man-hours.

Low levels of education, security and cybercrime, scalability of systems and weak network coverage, as well as investment costs, may hinder the adoption of 4IR. However, the 4IR will enable immediate payments, greater economic development and improved well-being for people around the world.

Impact of 4IR in Tourism

Tourism is a key factor for economic growth and poverty reduction as it creates direct and indirect jobs for low-skilled workers (Henseler, Maisonnave, & Maskaveva, 2022). Tourism stimulates domestic and foreign investment in new infrastructure and in the hotel and restaurant industry, in transport, in research and in travel agencies, as well as in the activities of tour operators and in the promotion and branding of tourism-related activities. In addition, tourism-related foreign exchange gains enable the import of capital goods that support domestic industries (Brida, Gomez, & Segarra, 2020).

As the tourism industry is also highly competitive, modernising the company's offering to better meet changing travel habits through new marketing strategies is critical to market success (Khatri, 2019). In this context, 4IR is relevant as it either provides the data needed for strategy and planning formulation or adds value by monitoring and changing business processes

The ability to use 4IR technologies to build new channels for future commercial growth with global audiences, control distribution, process and distribute information and increase internal efficiency has a favourable impact on companies in the industry. E-tourism is a new market that companies can enter to compete with rivals that may have much greater resources. This development is a huge advantage and resource for emerging businesses and owners. The new technologies also pose a challenge to current industry structures, practises and organisations. Potential customers, for example, can compare services, prices and previous reviews before making a purchase; thanks to the Internet, they now have greater bargaining power. In addition, customers can switch easily and much more cheaply via the internet and have lower transaction costs when using these services. As a result, there is now a culture of fierce competition. However, competition has also lowered barriers to entry, making it more affordable for hospitality and tourism businesses to use global distribution systems than for larger competitors

who use more customised databases and employ staff to maintain such systems. 4IR is considered as a game changer in tourism (Armoo, Franklyn-Green, & Braham, 2020; Şengel, 2021; Shaikh, 2022).

Impact of 4IR in Sports (case of football)

Sports and entertainment will be one of the most important business events. These will also be affected by the 4IR. Football has been taken as an example because of its popularity. The origin of football goes back to the Chinese who used the first ball around 250 BC. The Chinese made a ball from an inflated animal bladder and covered it with leather to make it more durable and uniform. Despite its simple rules, football has made many technical advances in the last century

Big Data analytics are revolutionising football by helping clubs, leagues and their respective governing bodies make informed decisions based on the information available. Bai and Bai (2021) have focused on three methods for analysing large amounts of sports data. One of them is statistical analysis, a branch of applied mathematics. They saw an example of how to evaluate the opponent's technical moves used in competition and their behaviour, which can be predicted, to develop a successful response strategy. Social network analysis in sport and the Sport Big Data Analysis Service Platform are two other techniques described.

Video assistant referee is a technology in football that uses a match director to review the referee's decisions. These decisions can relate to goals, penalties, direct red cards or incorrect decisions in awarding red or yellow cards.

The video assistant referee includes a human element (video referee and assistant referee, the operator), a technological element (video and audio system) and a social-ethical element (referee team dynamics, perception of fairness and justice). The video assistant referee is needed to resolve controversial situations in football matches and to ensure justice, quality and transparency.

Modern football uses artificial intelligence in several areas. Goal-line technology, semi-automatic offside technology, football score prediction and AI in player training are covered in this paper. This innovation in football uses either physical cameras or a changing magnetic field to track the ball and determine if it has crossed the goal line. Goal-line technology ensures that it

is accurately determined whether the ball has crossed the goal line by avoiding human error. It also creates transparency and fairness for all involved and increases the confidence of everyone involved, especially the fans.

Semi-automatic offside technology is a system that supports football referees in their decision-making, especially when it comes to offside decisions. The system uses 'Hawk Eye' technology to track movement and events on the pitch and make offside decisions faster and more accurately

Artificial intelligence will be widely used by football coaches in assessing their players. They will be able to assess a player's physical performance and health. Special cameras are used to collect data during training sessions. These cameras record the performance of individual players. Later, artificial intelligence can be used to look at the player's performance, such as work rate and tactics. The coaches use this information to improve the players' performance.

Artificial intelligence can also be used to monitor the health of players. Wearable technologies are used to collect data during training and matches. The analysed data, such as heart rate, helps the coaches and the football team to assess the health of the players. These technologies help to minimise injuries to players during training and matches.

Artificial intelligence is used in predicting football results. Data collection and statistics from previous matches make this possible. There are several factors that influence the results of football matches. These include injuries to players, home and away advantages and the psychological state of the players. A team playing at home has a better chance of winning because it is cheered on by more fans than the opponent. The impact of injuries to key players can reduce a team's chances of winning. This information is important for predicting football results.

The 4IR will increase accuracy on football pitches, improve decision-making on pitches, maintain discipline among players and spectators, allow spectators to see matches from different angles, and promote competitions.

Impact of 4IR in Transportation

4IR will impact transportations in a number of ways. Some of them will include shifting in customer expectations. Customers are increasingly aware of how they are being served, and this

increases the likelihood that they will switch to a competitor if their current service provider does not serve them well. In addition, the ability of providers to use the data they collect to improve their services. For example, the ability to use previous service reviews for a car service provider to improve the experience for the next customer. Furthermore, partnerships between car owners, transport service providers and software developers. Finally, revolution of operating models will emerge.

The Internet of Things has impacted the transport industry by improving car booking options, tracking vehicles and inventory during transport, counting passengers automatically (By installing sensors in public transport vehicles, these sensors are used to count the number of passengers getting in and out of the vehicles. This is useful to monitor the number of passengers in a vehicle at a given time and avoid overcrowding).

Considering that every business activity and transaction generates data, transport operators, like many other businesses, are faced with a huge amount of data to analyse and make decisions based on. To make better decisions with the available data, companies in the transport industry continue to use Big Data analytics tools to analyse the diverse and sometimes complex data in their systems to gain insights and intelligence. For example, transport companies can now use Big Data analytics to optimise their operations. This includes aspects such as choosing delivery routes, better managing fuel consumption (including times of day to drive, depending on delivery requirements) and more accurately predicting supply and demand. For international transport companies, the benefits of using big data analytics to make better decisions are clear.

The Future of Management

First, the 4IR brings Management 2.0: Ahn, Jang and Rhee (2022) predict that life comfort technology and blockchain technology will affect employment, and the variables of innovation technology, interface technology, human life technology and 3D technology will affect employment. In general, self-driving cars, decision making using Big Data, Internet of Things, wearable internet, designer technology, 3D printing technology and human health, as well as Bitcoin and Blockchain will influence the employment effect. Interestingly, the higher the

education level of graduates, the less prepared they are for future work (Adeosun & Adegbite, 2022). It will be management and computer sciences that will drive further the 4IR.

Conclusion

Even if the 4IRs cause disruption, it is in our hands to address them and implement the necessary changes and regulations to meet our rapidly changing environment. Only by tapping into the collective wisdom of our minds, hearts and souls can we effectively solve these problems. To achieve this, we need to cultivate and use four different types of intelligence to adapt, shape and harness the potential for disruption.

4IR will challenge the way business is conducted and skill requirements. Organisations need to understand and use knowledge. In the 4IR, these qualities of effective leadership have remained constant over generations and are a prerequisite for adaptability and survival. Emotional intelligence is an important factor in enhancing the social skills, motivation, self-awareness, empathy and self-regulation that are critical to success for leaders and policy-makers in the 4IR era

Gaps in workforce skills and capabilities

To successfully implement the tools required for the 4IR era, companies need a workforce with sufficient skills and capabilities. This means that companies need to focus not only on technology but also on their workforce if they are to successfully implement the 4IR. It is therefore important that educational institutions ensure that students are equipped with the appropriate skills. In addition, it is important for companies to find ways to develop these skills in their employees through continuous education and training. Considering that the 4IR is characterised by very rapid technological change, it is also important that company employees constantly update their knowledge of technological issues.

Customer expectations

Most companies claim to be customer-centric, but when real-time data and analytics are used to target and serve customers, these claims are put to the test. In the 4IR, it is important to ensure that the human element of the customer relationship is at the heart of the process, while at the same time evaluating and using data, improving products and experiences, and transitioning to a world of constant adaptation and improvement.

Data-enriched products

As goods and services are enriched with digital features that increase their value, new technologies are changing the way businesses view and manage their assets. For example, connectivity and software upgrades can be used after a product (a car) is purchased to improve it, rather than letting it deteriorate over time. Data analytics not only makes assets more resilient and durable, but also changes the function of maintenance. Assets can be continuously monitored and proactively maintained by analysing them with sensors, which improves their use. The focus is no longer on looking for individual defects. Instead, performance benchmarks based on data from sensors and tracked by algorithms can show if a piece of equipment is operating outside its typical operating range.

Recommendations

The fourth industrial revolution can be seen as a cause of disruption in all industries. However, it also offers businesses many constructive opportunities. Considering that the 4IR is impacting all industries, it is important for all businesses to find ways to position themselves to remain competent in this era

In this rapidly changing world, planning, understanding, developing and executing effective strategies that leverage 4IR technologies should be a priority for all companies. Successful application of 4IR can enable companies to improve efficiency, increase profitability, achieve growth or stability, and overall create exceptional value for customers, shareholders, other stakeholders and society at large.

Improving skills and personal training

Most of the applications of the fourth Industrial Revolution in Tanzania have been applied to individuals. The 4IR is having a major impact on the skills required in the global job market. The demand for software engineers, marketers, writers, and advisors has never been higher. Recruiters in today's world require high technical skills, not social or physical skills. As such, the majority fall into the unskilled or semi-skilled workforce. To keep up with the 4IR advancements, the societies need to promote efforts and encourage private organizations as well as external sponsors to provide training, seminars and podiums to gear 4IR integration. Human

resource involved in running these 4IR technologies must be trained for awareness before the introduction of these technologies.

Improving regulatory framework

Clear regulatory framework needs to be made the government should increase efforts in creating policies that give space for innovation to thrive. They need to articulate their goals of inclusive growth, then step back and enable actors across the economy to innovate and create learning ecosystems that manage the flow of 4IR opportunities. This will prepare them to recognize successes and support investments to support emerging startups and technological advancements (Akileswaran & Hutchinson, 2019).

However, no government can do it all. Tough political decisions and compromises are needed. Moreover, these decisions need to be adaptive and practical not theoretical and impractical. If advances are to be made in 4IR technology, it is important to understand that challenges faced are far more complex and may result to potential peril if not taken seriously.

Improve supporting technologies: Internet Connectivity and Electricity Supply

Advanced technologies rely on high speed and the reliable internet. Most parts of Tanzania lack internet connectivity. Government and telecommunication companies should work together in expansion of fiber network and deployment of 4G wireless technologies. Most parts of the world are yet to have access to reliable electricity. It is mandatory to benefit from the 4IR.

Mobilization of funds

Efforts have to have funds mobilized for purchase, implementation and running these 4IR technologies. Funds can be mobilized through sponsorship.

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Bank Specific Factors and Non-Performing Loans: Evidence from Listed Banks in Tanzania

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Abstract

The study aims to investigate the bank-specific determinants of non-performing loans (NPLs) for listed banks at the Dar es Salaam Stock Exchange (DSE). The study employed an explanatory research design to determine the impact of capital adequacy, bank operational efficiency and liquidity on NPLs of Tanzanian listed banks. By using 35 firm year observations of 7 listed banks over a 5-year period (2016-2020). Non-performing loans to gross loans ratio was used as the response variable. The study uses regression model to test the hypotheses. The empirical results reveal that capital adequacy and liquidity in general have significant impact on the NPLs of 7 listed banks in Tanzania. Bank operational efficiency had an insignificant impact to NPLs. This study was restricted to one category of financial firm that is listed banks at DSE. Future research should focus on a much broader scope by incorporating both listed and non-listed banks across East African region, more years, and the addition of both bank and industry-specific characteristics. If this will be done then a more inclusive and broader outcome will be achieved. Finally, the study recommends that listed banks should focus on maintaining adequate capital because the latter measures the bank's soundness level. Similarly, bank managers should focus on maintaining a reasonable liquidity position so as to safeguard the bank's reputation in the eyes

of its customers.

Keywords: Non-Performing loans, Bank specific factors, listed banks, Information asymmetry theory, Tanzania.

Introduction

Banks' primary business is credit advancement, so the likelihood of bank failure is high if borrowers fail to repay loans. Thus, banks concentrate on credit risk management, which aims to reduce the likelihood that borrowers will default on loan repayments, particularly to the point of creating non-performing loans. A loan becomes non-performing when the loan's 90-day term expires and the bank is unable to receive the principal amount plus interest (Goswami, 2021). There is evidence to support the notion that in an economy where the commercial banking system functions well, high levels of economic growth are also recorded. A dysfunctional banking system, on the other hand, is a recipe for increased poverty and slow economic growth (Hamza, 2017; Laryea, Ntow-Gyamfi, & Alu, 2016; Zhang *et al*, 2012).

Commercial banks are more profitable when they increase their lending activities in a prudent manner; otherwise, these banks will likely record high levels of non-performing loans, implying poor credit management on the part of the commercial banks. NPLs have a negative impact on the bank's interest income and lead to loan losses because many customers fail to meet their obligations to repay the principal and interest, affecting the bank's overall performance. To avoid these consequences, commercial banks must conduct a proper credit analysis on their customers, and regulatory authorities, which are usually the respective Central Banks, must ensure that all financial institutions follow the provisions of the prudential guidelines (Ally, 2014; Kolapo *et al.*, 2012).

Banks with a high NPL ratio may see their performance suffer in the short and long term. When NPLs are written off, banks generate less income, reducing profitability and, as a result, decreasing capital. In extreme cases, high NPLs can render a bank insolvent hence affecting the bank's good standing in the eyes of the public (European Commission, 2018; Goswami, 2021). The main causes of high NPLs are poor credit procedures, inexperienced credit specialists, high mark-up spreads, poor credit principles, and borrowers' lack of a monitoring policy. It should be noted that NPLs are the most important indicator of credit risk in a country's banking system. Bad loans limit banks' ability to grow financially because they cause liquidity issues, preventing them from extending funds to other viable business ventures (Khan *et al.*, 2020). It is for a fact

that every banking institution's primary goal is to operate profitably in order to maintain stability and long-term growth. However, high levels of non-performing loans (NPLs) in the banking industry have a negative impact on private investment, impair a bank's ability to settle its liabilities when they become due, and limit the scope of bank credit to borrowers (Warue, 2013). NPLs stifle income, forcing banks to borrow more money, increasing the bank's costs. This creates a reputational risk for the bank, as NPLs harm the bank's reputation. Bank-specific variables or internal factors are a by-product of business activity. They include all of the variables that are under the management of commercial banks (Siddique *et al.*, 2021). For instance NPLs reached their record high in Europe in 2015, topping €1 trillion in gross lending, more than doubling from the level in 2009. In 2015, Italy reached the highest percentage of NPLs in all of Europe (16.70%). It is worth knowing that NPLs are a result of the major financial crises that struck the capital market in 2008 and 2012 and soon spread to the actual economy. (Bolognesi *et al.*, 2020; Cincinelli and Domenico, 2017)

Empirical literature reveals that a rapid increase of NPLs is one of the basic ingredient that spice up the banking crisis across countries (Amin *et al.*, 2019; Ashraf and Qurrat, 2019; Khan *et al.*, 2020). It is important to note that excessive NPLs can have a detrimental influence on banks' performance in a number of ways. When NPLs are written off, bank profitability suffers which could lead to higher funding costs and possibly lower capital reserve for banks. As a result, banks will find it difficult to extend new loans to businesses and individuals (Aiyar *et al.*, 2016; European Commission, 2018). In light of this, nations all over the world must exercise caution while coping with an increase in NPLs across the banking industry because an increase in NPLs reported by banks results in a more fragile financial system. High NPLs undermine the economy or country's financial position, this call for the regulatory bodies to take precautionary measures towards lowering the NPLs. It is crucial to remember that if banks engage in hazardous lending, the buildup of NPLs threatens the viability of the banking system. Therefore, the purpose of our study is to ascertain the effects of bank-specific factors (capital adequacy, liquidity, and bank operating efficiency) on NPLs of seven banks that are listed at the DSE over a five-year period, from 2016 to 2020.

Objective of the study

General objective

The general objective of this study is to determine the impact of bank-specific factors on Non-performing loans of listed banks at the Dar es Salaam Stock of exchange (DSE).

Specific objectives

- a) To establish the impact of capital adequacy on Non-performing loans of listed banks in Tanzania
- b) To assess the impact of bank operational efficiency on Non-performing loans of listed banks in Tanzania
- c) To evaluate the influence of liquidity ratio on Non-performing loans of listed banks in Tanzania

Rationale of the study

Empirical evidence supports the contention that in an economy where commercial banking system functions well, high levels of economic growth are expected. A dysfunctional banking system is a recipe for slow economic growth and an increased poverty amongst people (Hamza, 2017; Laryea, Ntow-Gyamfi, & Alu, 2016; Zhang *et al*, 2012). In this light this study's focus on NPLs will benefit various stakeholders such as the listed banks, the capital market, researchers and academicians interested in this line of work. To the listed banks this study will shed a light on various issues pertaining to NPLs in the banking environment. To academicians the findings will arouse their curiosity to research further as far as NPLs is concerned. To the capital market this study is important as it will add to already existing literature on various issues pertaining to listed banks in Tanzania.

Literature Review

Glimpse of Tanzanian Banking sector and NPLs

Non-performing loans (NPLs ratio)

Non-performing loans are advances that remain unpaid, and the International Monetary Fund (IMF) stated that loans are considered NPLs if they do not generate interest and principal for at least 90 days (Khan *et al.*, 2020). The ratio of non-performing loans in a bank's loan portfolio to all of the outstanding loans held by the bank can also be used to define non-performing loans (Ciukaj & Kil, 2020). The NPLs ratio is a useful indicator of a bank's ability to collect payments

from debtors, and banks are required by law to disclose it in order to assess their exposure to credit risk and the caliber of their outstanding loans (Ciukaj, R., & Kil, 2020; Rezina, S., Chowdhury & Jahan, 2020). Tanzanian banking sector revealed that it was profitable, adequately capitalized, had a satisfactory level of liquidity, and had improved asset quality. The banking sector's NPL-to-gross-loan ratio exceeded the desirable ceiling of 5%, averaging 9.3% in 2021 compared to 8.70% in 2020 (The World Bank., 2022; Bank of Tanzania, 2021)

Table 1: Tanzanian banking sector NPLs ratio from 2016 to 2020

Year	NPLs ratio (%)
2016	9.61
2017	11.52
2018	9.93
2019	9.61
2020	8.70

(The World Bank., 2022)

Measures taken by BOT to address the NPLs in Tanzania

According to BOT (2021) , the public notice stated that various factors contributed to the rise of NPLs in Tanzania. BOT proposed four (4) measures to address this issue, as a high rate of NPLs is one of the major causes of high lending rates, which may lead to banking sector instability. These measures are as follows:

- 1) BOT focused on examining the banks and financial institutions to determine the causes and employees directly responsible for non-performing loans. If it is determined that a specific employee is responsible for NPLs as a result of not following procedures, fraud or a lack of integrity, the bank or financial institution will be required to take appropriate legal action against

the employee (s).

2) BOT required banks and financial institutions with employees who have non-performing loans with another bank or financial institution to report the employee(s) to credit reference bureau. But if it is discovered that the failure to service the loan was caused by negligence, fraud, or a lack of integrity, the Bank of Tanzania will blacklist the employee and prohibit them from working in any bank or financial institution operating in Tanzania.

3) BOT required banks and financial institutions to refuse to offer credit to unscrupulous borrowers who borrowed with the intent of not repaying the loans or using descriptive means.

4) BOT required banks and financial institutions to submit information about civil servants with non-performing loans to their respective employers for appropriate action. In addition, the details of such borrowers will be kept in a special register that will be shared with banks and financial institutions in order to ensure that such civil servants do not access any additional credit accommodation until appropriate action is taken and the non-performing loan is regularized.

Theoretical framework

Information asymmetry theory

This theory's underlying premise is that creditors would undoubtedly be more knowledgeable than debtors about the risks for which the project raises money. This compounds the problems of adverse selection and moral hazard. The inability of banks, who act as creditors, to determine which debtors have a good chance of successfully paying off their financial obligations and which do not due to information asymmetry contributes highly to market failures. Consequently this problem can have an adverse impact on bank's performance and credit management resulting into an increase in NPLs (Chantal *et al.*, 2018; Ruslim & Bengawan, 2019). The process of transferring money from surplus to deficit units is less effective as a result of all these issues. In contrast, banks deal with these pressing difficulties by prioritizing long-term client relationships, exchanging information, and finally, allocating monitoring of debtors (Atoi, 2018)

Empirical Literature Review and hypothesis development

Capital adequacy against non-performing loans

The ability of an organization to withstand unusual losses is measured in terms of capital

adequacy, which also demonstrates the bank's tenacity and stability during times of crisis (Ermias, 2016; Khan *et al.*, 2020). The basic capital strength ratio is capital adequacy, which is a measure of total equity to total assets (Salem Al Zaidanin, 2020). Thus, capital adequacy is a measure of bank's soundness.. It represents the organization's ability to withstand abnormal losses and also demonstrates the organization's strength and stability during times of crisis. Capital adequacy is regarded as the primary indicator of a bank's financial performance, and its adequacy reflects a bank's inner strength (Ermias, 2016; Khan *et al.*, 2020). Low-capitalized banks tend to get involved in high-risk loans that are issued due to inadequate credit scoring and monitoring. These risky credit activities increase loan defaults, implying a negative relationship between bank capital and NPLs ratio (Keeton, 1999). This is evidenced in previous studies such as (Khan *et al.*, 2020; Koju *et al.*, 2018; Kumar and Kishore, 2019; Makri *et al.*, 2014). Additionally, managers in well capitalized banks follow a liberal credit granting policy since they are confident that the banks are less likely to fail cause they are too big to fail. These credit policies imply that a positive relationship exists between capital adequacy and NPLs (Rajan, 1994). Previous studies revealed a positive relationship exists between capital adequacy and NPLs (Amuakwa and Boakye, 2015; Siddique *et al.*, 2021)

Bank operational efficiency against non-performing loans

Bank operational efficiency is measured using credit-deposit ratio and a higher credit-deposit ratio indicates that deposits are being mobilized to generate revenue and increase profitability (Onyango & Olando, 2020). Profitability encourages commercial banks to invest deposits in less risky sectors with high credit standards, lowering the likelihood of commercial banks recording NPLs. Bank operating inefficiencies are due to poor loan appraisal, credit monitoring laxity, and ineffective credit management policy (Amoako, 2015). A study conducted in the Pakistan banking sector for 11 years (2000-2010) using time series data revealed that the credit to deposit ratio has a negative impact on NPLs in the Pakistan banking sector (Jameel, 2014). In another study that was conducted in Kenya of 43 licensed commercial banks from 2012-2016 on the impact of bank-specific factors on NPLs revealed that bank operational efficiency is directly proportional to NPLs and has a moderate positive significant influence on the NPLs (Onyango & Olando, 2020).

Liquidity ratio against non-performing loans

A bank's general ability to withstand a liquidity shock is revealed by its liquidity ratio. Given that market liquidity is uniform across all banks, the general rule is that the higher the proportion of liquid assets in total assets, the greater the capacity to withstand a liquidity shock (Vodova, 2011). High NPLs imply that banks will inevitably experience liquidity problems, which weakens their capacity to achieve the minimal liquidity requirements set by regulatory bodies (Taiwo & Mike, 2021). Thus, a high liquidity ratio would help to reduce the amount of NPLs, and conversely, a low liquidity ratio would result in a high level of NPLs for the banks (Msomi, 2022). Previous empirical studies contend that liquidity and NPLs have a negative relationship. For instance Iqbal (2012) evaluated the liquidity risk between conventional and Islamic banks in Pakistan from 2007-2010 using five explanatory variables namely; bank size, NPLs, return on equity (ROE), capital adequacy ratio and return on assets (ROA). The results showed a significant and negative relationship between NPLs ratio and liquidity ratio suggesting that the higher NPLs ratio the lower the liquidity ratio.

Table 2: Relationship between response variable and explanatory variables

Variables	Relationship to NPLs	References
Capital adequacy	Negative	(Khan <i>et al.</i> , 2020; Kumar and Kishore, 2019).
	Positive	(Amuakwa and Boakye, 2015; Siddique <i>et al.</i> , 2021)
Bank operational efficiency	Positive	(Onyango & Olando, 2020).
	Negative	(Jameel, 2014)
Liquidity	Negative	(Vodova, 2011; Iqbal, 2012).

Hypothesis of the study

This study is guided by the following hypothesis;

H1: Capital adequacy ratio affect NPLs of listed banks in Tanzania

H2: Bank operational efficiency affect NPLs of listed banks in Tanzania

H3: Liquidity ratio affect NPLs of listed banks in Tanzania

Method

The study employed explanatory research design to establish the cause and effect relationship that exists between the response and explanatory variables (Magoma *et al.*, 2022). The response variable was the NPL ratio and the explanatory variables were capital adequacy, liquidity, and bank operational efficiency of 7 listed banks in Tanzania. Quantitative approach was used through which secondary data were retrieved from various sources including banks' official websites, annual reports and audited financial statements. The majority of previous empirical studies used secondary published data to investigate the relationship between non-performing loans and bank-specific factors (Siddique *et al.*, 2021; Khan *et al.*, 2020; Kumar and Kishore, 2019; Amuakwa and Boakye, 2015).

The eligibility criteria were to select all banks that disclosed their annual reports for at least three consecutive years. According to Fosu, Ntim, Coffie & Murinde (2017), they argued that the minimum of three consecutive years of observations is recommended for reliable results. Secondary data were retrieved from the annual reports. Annual reports of selected listed banks were obtained from the website of African Financials available at <https://africanfinancials.com/>. The latter website makes available the annual reports of listed African firms. The selection criteria and the time period used was based on the availability of data, the size of the banks, the bank's performance and their significance in defining Tanzanian economic conditions. Thus, 7 listed banks from the DSE were analyzed for a period of 5 years (35 data points). According to Bushra & Mirzsa (2015), they recommended that for a quantitative study to be viable it should involve more than 30 observations or data point.

Data was analyzed through the use of Statistical Package for Social Sciences (SPSS) version 20. Pre-regression analysis (Multicollinearity and autocorrelation tests) were performed to test the validity of data used. Finally, correlation and regression analysis was performed to ascertain the relationship and cause and effect of bank-specific factors and NPLs of listed banks in Tanzania.

Table 3: Selected Listed Banks in Tanzania

S/NO	Company	Abbreviation
1	CRDB Plc	CRDB
2	Dar es Salaam Commercial Bank Plc	DCB
3	Kenya Commercial Bank Plc	KCB
4	Maendeleo Bank Plc	MBP
5	Mkombozi Commercial Bank Plc	MKCB
6	Mwalimu Commercial Bank PLC	MCB
7	National Microfinance Bank Plc	NMB

Source: The website of African Financials available at <https://africanfinancials.com/>

Variable construction

Financial ratios are a recommended tool for evaluating firm performance in developing economies such as Tanzania. This is primarily due to the market's inherent inefficiency. (Munisi, 2017). Thus, three (3) bank-specific variables were used in this study: capital adequacy, liquidity, and bank operational efficiency as used in previous studies (Ghosh *et al.*, 2019; Onyango & Olando, 2020; Singh *et al.*, 2021).

Response variable

Non-performing loans are advances that remain unpaid, and the International Monetary Fund (IMF) stated that loans are considered NPLs if they do not generate interest and principal for at least 90 days (Khan *et al.*, 2020). Non-performing loans ratio is measured as the ratio of non-performing loans to total loans of listed banks in Tanzania as used in other studies (Elton & Mike, 2021; Ghosh *et al.*, 2019).

Explanatory variables

Capital adequacy ratio is the ratio between total equity to total assets of listed banks as measured in other empirical studies (Magoma *et al.*, 2022; Kingu *et al.*, 2018)

Liquidity ratio: This ratio is computed as the ratio between liquid assets to total assets of listed banks (Taiwo & Mike, 2021)

Bank operational efficiency: This variable is measured as the ratio of total loans to total deposits

of listed banks in Tanzania (Taiwo & Mike, 2021)

Specification of the model

Data were analyzed through regression analysis to test the hypotheses guiding this study

Multiple linear regression dimension is established based on the impact of bank-specific factors on Non-Performing loans (NPLs) as a response variable as seen below;

$$\text{NPLs} = f(\text{Bank-specific factors}) \dots \text{eqn 1}$$

To achieve the objective of the study the model was further broken down to show the explanatory variables and their impact on the NPLs of listed Tanzanian banks from 2016-2020 as seen below;

$$\text{NPL}_{it} = \beta_0 + \beta_1 \text{CA} + \beta_2 \text{LQ} + \beta_3 \text{LDR} + \varepsilon \dots \text{Eqn 2}$$

Where:

NPL stands for NPL ratio of listed banks from 2016 to 2020

CA stands for Capital adequacy of listed banks from 2016 to 2020

LQ stands for Liquidity ratio of listed banks from 2016 to 2020

LDR stands for Loan to deposit ratio of listed banks from 2016 to 2020

β_0 stands for a Constant term

$\beta_1, \beta_2, \beta_3$, stands for coefficients of determinants of NPLs

ε = the error term

Results

Descriptive Statistics

The descriptive statistics are shown in Table 4 with NPLs/TL as the response variable, and capital adequacy, liquidity, and bank operational efficiency as the explanatory variables. According to descriptive statistics, the average NPLs is 7.88%, which is just a slightly above desired ceiling of 5% pointed out by the Bank of Tanzania (Bank of Tanzania, 2021). The mean of NPLs was slightly higher in this study than in two other empirical studies, (Ghosh *et al.*, 2019: 4.916%) and (Siddique *et al.*, 2021: 7.206%), but lower than in studies by (Taiwo & Mike, 2021: 11.89%) and (Onyango & Olando, 2020: 8.18%).

It was also revealed that the mean value of capital adequacy from our analysis was 22.73%, which was slightly higher than (Taiwo & Mike, 2021: 21.06%) and slightly lower than (Siddique

et al., 2021: 13.885%). The liquidity mean value was 18.86%, which was marginally lower than a study conducted in Nigeria (Taiwo & Mike, 2021; 38.15%). Finally, the mean value of bank operational efficiency was 84.99%, slightly higher than the result of another study conducted in Kenya (Onyango & Olando, 2020: 72.18%).

Table 4: Descriptive Statistics of model variables for all (35) firm years

Variables	Mean	Min	Max	SD	Obs
NPLs/TL	7.88	0	20	5.37	35
Capital adequacy (%)	22.73	8.20	92.74	19.45	35
Liquidity ratio (%)	18.86	8.21	38.90	7.87	35
Bank operational efficiency (%)	84.99	34	254	43.71	35

Source: Estimation using SPSS

Correlation analysis

Table 5 presents the correlation matrix results for all the variables used in the study. NPLs ratio is negatively related to both capital adequacy ($r = -54.7\%$) and liquidity ($r = -50.9\%$) and positively related to bank operational efficiency ($r = 3.8\%$). It is evident that there is a negative and significant relationship between NPLs and capital adequacy. Keeton (1999) affirmed that due to poor credit scoring and monitoring, low-capitalized banks frequently participate in high-risk loans which lead to an increase in customer loan defaults. These risky credit practices raise the likelihood of loan defaults, suggesting a negative correlation between capital adequacy and NPLs ratio as evidenced in other empirical studies (Khan *et al.*, 2020; Koju *et al.*, 2018; Kumar and Kishore, 2019). Likewise the findings reveal that NPLs ratio and liquidity are negatively and significantly related implying that as the liquidity position of the bank decreases the chances of an increased NPLs is high as contended by (Vodova, 2011; Iqbal, 2012).

The existence of inter-correlation between the explanatory variables was investigated using multicollinearity test. It should be noted that multicollinearity is not accepted since data with multicollinearity are deemed unreliable (Mazengo & Mwaifyusi, 2021). Table 5 demonstrates unequivocally that the Variance inflation factor (VIF) for each explanatory variable is less than 10 and tolerance ($1/VIF$) is above 0.1. As a general rule, highly collinear variables are those whose VIF is greater than 10, and vice versa (Taiwo & Mike, 2021). Multicollinearity problem

exists if VIF is greater than 10 and $1/VIF$ is less than 0.1 (Fawad & Taqadus, 2013; Epaphra, 2020; Magoma *et al.*, 2022). All the explanatory variables were free from multicollinearity. Other researchers have adopted the same approach, such as (Alkhazaleh, 2017; Malede, 2014; Magoma *et al.*, 2022).

Table 5: Correlation Matrix of the variables for all (35) firm years

	1	2	3	4	VIF	1/VIF
1. NPLs/Total loans	1					
2. Capital adequacy	-.547**	1			1.230	.813
	.001					
3. Bank operational efficiency	.038	.325	1		1.118	.894
	.830	.057				
4. Liquidity	-.509**	.314	.092	1	1.109	.901
	.002	.066	.598			

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Estimation using SPSS

Regression Analysis

Table 6 shows the estimated results of regression done using NPLs ratio as a response variable. It is seen that capital adequacy and liquidity exhibit negative coefficients whereas bank operational efficiency exhibit positive coefficients. The coefficient of determination (R-square) is 48% indicating that 48% of variation in NPLs among listed banks in Tanzania is explained by a change in capital adequacy, bank operational efficiency and liquidity. Likewise, Table 6 below depicts the value of F-statistics which is 9.373 with p-value of .000^b which is less than 5%. This implies that the overall model is statistically significant. The existence of auto-correlation implies a zero covariance of error terms over time. This technically implies that error linked to one observation is not correlated with errors linked to other observations (Onyango & Olando, 2020). Durbin-Watson test is the one of the most effective test for detecting the presence of autocorrelation (Kamboj & Gupta, 2020). There is no autocorrelation if the values range from 1.5 to 2.5 (Mazengo & Mwaifyusi, 2021). The results show that the Durbin-Watson value was 1.659. Thus, there was no autocorrelation between the data set (Seen in Table

6 below).

Table 6: Regression Results

Model 1						
	Coef	Coef	NPLs/TL			
		values	t-	p-	Sig	Hypothesis
			statistics	value		testing
Constant	β_0	13.369	6.142	.000		
Capital adequacy	β_1	-.140	-3.516	.001	S	Accept
Bank operational efficiency	β_2	.029	1.722	.095	NS	Reject
Bank liquidity	β_3	-.254	-2.714	.011	S	Accept
Diagnostic Statistics						
R-Squared		48%				
Adjusted R Squared		43%				
F-statistics		9.373				
Prob (F-statistics)		.000 ^b				
Durbin-Watson Test		1.659				
Standard error of the estimate		4.072				
Mean VIF		1.152				
Mean 1/VIF		0.869				
Observations		35				

Note: S= significant and NS= Not significant

$$\text{NPL} = 13.369 - .140\text{CA} + .029\text{LDR} - .254\text{LQ} + \varepsilon \dots\dots\dots \text{Eqn 2}$$

Discussions

Capital adequacy. H1 predicts capital adequacy affects the NPLs of listed banks in Tanzania. However, the findings in Table 6, indicate that there is a significant relationship between the two variables. According to Keeton (1999) he argued that managers of a low capitalized banks

tend to get involved in high-risk loans that are issued due to inadequate credit scoring resulting into an increase in loan defaults from customers implying a negative relationship between capital adequacy and NPLs. The significant relationship is consistent with previous findings as (Khan *et al.*, 2020; Koju *et al.*, 2018; Kumar and Kishore, 2019; Makri *et al.*, 2014) though not consistent to other empirical findings such as (Amuakwa and Boakye, 2015; Siddique *et al.*, 2021).

Bank operational efficiency: The credit to deposit ratio is used to assess a bank's operational efficiency. A higher credit to deposit ratio indicates that deposits are being mobilized to generate revenue and increase the profitability of listed banks. The findings reveal that bank operational efficiency does not affect NPLs of listed banks in Tanzania. Thus, H2 is rejected. These findings are contrary to a study conducted in Kenya (Onyango & Olando, 2020) and consistent to a Pakistan study conducted by (Jameel, 2014).

Liquidity. H3 predicts liquidity ratio affects the NPLs of listed banks in Tanzania. However, the findings in Table 6 reveals that liquidity ratio affect the NPLs ratio. Thus, H3 is accepted. These results imply that high liquidity ratio would help to reduce the amount of NPLs whereas low liquidity ratio would result into high NPLs. (Msomi, 2022). Additionally, these findings are in line with other empirical studies (Vodova, 2011; Iqbal, 2012).

Conclusion, implication and area for further studies

Capital adequacy and liquidity have a significant impact on the NPLs of 7 listed banks in Tanzania for a five-year period that is from 2016 to 2020. Descriptive statistics reveal that the mean value of NPLs for 7 listed banks was 7.88% slightly above the ceiling of 5% set up by the bank of Tanzania (Bank of Tanzania, 2021). The mean of NPLs was slightly higher than other empirical studies , (Ghosh *et al.*, 2019: 4.916%) and (Siddique *et al.*, 2021: 7.206%). Additionally, bank operational efficiency showed an insignificant impact to NPLs at 5% level.

Research limitation/future studies: This study was restricted to one category of financial firm that is listed banks at DSE. Future research should focus on a much broader scope by incorporating both listed and non-listed banks across East African region, more years, and the

addition of both bank and industry-specific characteristics. If this will be done then a more inclusive and broader outcome will be achieved as far as the listed banks are concerned across the East African region

Recommendations

The study recommends that listed banks should focus on maintaining adequate capital because the latter measures the bank's soundness level. Similarly, bank managers should focus on maintaining a reasonable liquidity position so as to safeguard the bank's good reputation in the eyes of its customers

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Effects of Macroeconomic variables on Performance of Listed Firms at Dar es Salaam Stock Exchange, Tanzania

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Abstract

This article explored the effect of macroeconomic factors on Dar es Salaam Stock Exchange (DSE)-listed companies. In this study, a mixed-sequential explanatory research strategy was employed. The analysis covered the years 2006 through 2021 and included a total of 21 DSE-listed companies. Data was obtained from DSE, BOT and NBS. For qualitative data collection, semi-structured interviews were employed. Using a Random Effect model with three estimates and theme analysis, quantitative and qualitative data were assessed. There were statistically significant positive coefficients for GDP, inflation, and money supply, while there were statistically significant negative coefficients for interest rate and exchange rate. It was determined that macroeconomic conditions impact firm performance. The research suggests that regulatory agencies and the Bank of Tanzania develop policy frameworks to regulate and control macroeconomic factors such as managing the money supply of the economy and safeguarding the national currency to reduce exchange rate volatility.

Keywords: Macroeconomic variables, performance, listed firms, stock exchange

Introduction

Variations in macroeconomic variables have an influence on the optimal performance of publicly traded companies. These elements are external to the organization and are beyond the control of management. Politico-environmental variables, suppliers, government regulations, and competitors all play an influence (Issah & Antwi, 2017). Multiple external factors influence the earnings growth of a corporation (Obeng-Krampah, 2018). Despite the existence of the aforementioned variables, many researchers regard the exchange rate, government expenditures, unemployment, population, interest rate, inflation rate, money supply, and Gross Domestic Product (GDP) to be the most crucial and well-established factors (World Bank Report, 2019; Haider et al., 2018; Issah & Antwi, 2017; Ngowi, 2015). When assessing the importance of

disclosing to the government, stock exchange, listed firms, and investors the impact of macroeconomic factors on the performance of listed firms, it is vital to keep in mind that these variables are not independent (Epaphra & Salema, 2018).

The relationship between macroeconomic conditions and the performance of publicly traded enterprises has been the subject of numerous studies, although experts have obtained contradictory findings. Using data from Jordan, Zeitun et al. (2007) proved that the cost of debt is influenced by macroeconomic variables such as the exchange rate, since a high exchange rate leads to an increase in interest rates, which in turn affects other sectors. Rehman (2016) of Pakistan investigated seven macroeconomic indicators and discovered that inflation rate was favorably correlated with firm performance, whereas exchange rate, money supply, and other factors were adversely correlated with the performance of listed enterprises.

Dewi et al. (2019) in Indonesia found that the country's inflation rate decreased the earnings of publicly traded companies. In Iran, Alibabae and Khanmohammadi (2016) found that while inflation and interest rates had a negative impact on company performance, the exchange rate had a beneficial impact. According to Tuncay and Cengiz (2017), the Turkish experience reveals a favorable association between company performance (profitability) and GDP. Gatsimbazi et al. discovered that the performance of listed enterprises was inversely connected with GDP, exchange rate, and inflation rate (2018). According to the findings of Ismail et al. (2018), GDP and interest rates positively impact the performance of Malaysian firms.

In an African context, the effect of macroeconomic conditions on corporate performance has also been explored. Gatsi et al. (2013) investigated firm performance in Ghana and discovered that fluctuations in the country's currency rate, interest rate, and inflation rate were positively connected with firm performance. Omodero and Mlangi (2019) found a negative correlation between company performance, interest rates, and currency exchange rates in Nigeria. In their 2015 analysis, Simiyu and Ngile discovered a negative association between publicly traded enterprises in Kenya and GDP growth. In contrast, Kolapo et al. (2018) found a positive correlation between GDP and money supply and firm performance in the Nigerian economy, whereas earlier study proved the opposite. There is a paucity of study on how changes in

Tanzania's macroeconomic environment affect the performance of publicly traded enterprises. For instance, Epaphra and Salema (2018) and Gwahula (2018) analyzed stock prices and stock market performance, but their evaluations of the factors (inflation rate, GDP, money supply, and exchange rate) revealed contradictory results.

Existing global disagreements on the topic under investigation suggest that the relationship between macroeconomic conditions and the performance of listed firms is inconclusive, thus requiring additional research. Such contradicting findings are widespread in various contexts, but the differences can be related to the macroeconomic conditions of the respective countries, the data collected, the number of observations, the time period, and the analytical tools utilized for examination. With such discrepancies, the design of policies and the direction they must take become difficult; therefore, avoiding such inconsistencies is crucial for a thriving economy. In this regard, revealing the relationship between macroeconomic variables and the performance of publicly traded companies would be important for developing economies and would aid in the formulation of suitable macroeconomic policies.

Consequently, the primary objective of this article was to investigate the macroeconomic determinants influencing the performance of DSE-listed enterprises. By comparing firm performance to macroeconomic variables such as interest rate, exchange rate, inflation rate, money supply, and GDP, the purpose was achieved. This led to testing the subsequent hypothesis:

The performance of Dar es Salaam Stock Exchange-listed companies is unaffected by macroeconomic conditions.

Theoretical Underpinnings of Paper

The research was guided by Open Systems Theory (Bertalanffy, 1969), which states that "organizations operate in an open context in which their activities are significantly affected by macroeconomic forces in the environment." The organization has no control over the macroeconomic forces in their entirety. Firms must contend with macroeconomic forces such as the interest rate, currency rate, money supply, inflation rate, and GDP.

This idea demonstrates that an organization cannot succeed on its own and must instead rely on the macro economy. Firms must both adapt to their environment and capitalize on the risks associated with interactions (Owolabi, 2017; Laszlo & Krippner, 1998; Buckley, 1967).

Bertalanffy (1969) asserts that managers of enterprises must be cognizant of their surroundings and how it influences corporate performance. In essence, we might argue that a firm's ability to respond and adapt to an ever-changing environment is contingent on its macroeconomic environment.

The firm's problems stem from the fact that it will always play a reactive role with regard to the fluctuations in macroeconomic variables; it has no control over inflation or exchange rates, and the only option it has when such variables shift is to respond to the changes with complex solutions that are within the vicinity of its existing resources, which can ultimately have a negative impact on firm performance. Theoretically, organizations will have a competitive edge if their organizational structure is well-aligned with their external environment. This is due to the fact that external/macroeconomic forces may always influence their performance.

Methodology

This report is based on a study employing a mixed research approach with an explanatory sequential layout. This strategy includes tools for qualitative and quantitative data collection, analysis, and interpretation (Creswell & Plano Clark, 2011). The concept of multiple approaches was chosen since it yields more dependable and valid findings than a single method (Bentahar & Cameron, 2015). Using a combined research technique, however, makes it easy to verify data from both methods (Creswell, 2013). Using this strategy, a researcher collects both quantitative and qualitative data. In the second step of data collection, the researcher collects qualitative data after acquiring quantitative data for validation. The quantitative data gathered during the initial phase of data collection are related to the qualitative data collected during subsequent phases. (Bryman & Bell, 2015).

Model Specification and Data Analysis

Multiple linear regression was performed in order to undertake an analysis of the data. Several studies (Dewi et al., 2019; Issah & Antwi, 2017; Alibabae & Khanmohammadi, 2016) have utilized panel data and multiple linear regression to examine the relationship between macroeconomic variables and the performance of enterprises. Due to the continuous nature of the dependent variable, multiple regression was a suitable statistical technique for this inquiry. Equation (i) displays the model that was employed in this study.

$$ROA_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 IR_{it} + \beta_3 IFR_{it} + \beta_4 MS_{it} + \beta_5 EXR_{it} + \beta_6 FS_{it} + \beta_7 FA_{it} + \beta_8 GDIVER_{it} + FD_i + TD_t + \varepsilon_{it}$$

..... (i)

ROA is the dependent variable, β_0 is the constant, β_1 to β_7 are the estimated coefficients of GDP, interest rate, inflation rate, money supply, exchange rate, business size, firm age, and geographical diversity. FD_i is a firm dummy that represent the unique influence of a time invariant firm specific factors, whereas TD_t is a time dummy that represents the unique influence of a time variant factors, and ε is an error term that is intended to be white noise, where I and t are respective firm and time units. The researcher conducted additional regression analyses to determine if the results were compatible with the foundational model. The DSE's Main Investment Market (MIM) and Enterprises Growth Market (EGM) windows were utilized for the research. In the investigations, two estimates, 1 and 2, were used for each window.

Based on the study questions, an interview guide was prepared for qualitative analysis. In order to make sense of and utilize the acquired data, theme analysis was applied to the data analysis process. The process of thematic analysis involves identifying, analyzing, and presenting a comprehensive account of the collected and identified topics (Braun & Clarke, 2006). Previous research on the macroeconomic variables that influence firm performance yielded five pre-established themes. The topics covered exchange rate, interest rate, inflation rate, money supply, and GDP.

Data Type and Sources

For qualitative data collection, semi-structured interviews were used. It is thought that the strategy is adaptable and compatible with numerous data-analysis techniques. Using this method, the researcher conducted interviews with a subset of participants and allowed them to respond freely to the interview questions (Bryman, 2016). Secondary panel data on the dependent variable were obtained from the audited annual financial reports of DSE-listed companies (firm performance in terms of Return on Assets). Similarly, panel data for macroeconomic variables like GDP, inflation rate, interest rate, currency rate, and money supply were gathered from the National Bureau of Statistics (NBS) and the Bank of Tanzania's annual reports (BOT). Since

they provided for realistic and generalizable results, panel data for all locally listed enterprises were utilized from 2006 to 2021 (Baltagi, 2005). Panel data were used because they may combine cross-sectional and time series dimensions, eliminate measurement challenges caused by omitted and unobservable variables, and produce more trustworthy and generalizable conclusions than cross-sectional and time series data alone (Biorn, 2017; Woodridge, 2002). In terms of chronology, the study data began in 2006, when DSE began electronically storing data. Moreover, the Tanzania Company Act of 2002 became effective in 2006, and the bulk of listed businesses began to comply with the Act's provisions in that year. The majority of publicly traded corporations implemented International Financial Reporting Standards (IFRSs) for financial report production in 2006. Consequently, data collection happened between January and December for each of the years studied.

Sampling and Sample Size

Nine respondents, including two regulators(R) named R1 and R2 and one broker (B) sampled purposively and named B1, participated in semi-structured interviews. In addition, data was collected from six listed firms (F) acquired from two clusters, namely four from the MIM window out of sixteen firms (called F1, F2, F3, and F4), and two from the EGM window out of five listed firms that were available during the data collection period (named F5 and F6). Due to the considerable information, experience, and skills that the sampled respondents have regarding the issue of the study, a diverse group was sampled to provide key informants. In conducting interviews, ethical problems and methods that protected the anonymity, privacy, and dignity of interviewees were taken into account (Bryman, 2016).

The researcher selected firms to participate in the study using a census-like method in which all locally listed businesses were considered for inclusion. This is because there were just a few of companies listed on the DSE, and deleting some of them would lower the quantity of observations, so calling into doubt the veracity of the conclusions. Therefore, the sampling frame includes all 21 local enterprises that were trading on the DSE at the end of 2021.

Quantification of Variables

Several financial indicators, including Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS), and Sales Growth (SG), have been used to analyze firm's performance (Tangen, 2003). In this study, the ratio of ROA to firm performance served as the dependent variable. This is due to the fact that ROA is the most commonly used financial ratio to evaluate performance, since it measures the ability of corporate managers to use firm assets to generate profits for the organization (Liargovas and Skandalis, 2010). Other academics have utilized ROA as a way for measuring firm performance (Issah and Antwi, 2017; Kanwal and Nadeem, 2013). Equation (ii) contains the utilized ROA formula

$$ROA = \frac{\text{profit before tax}}{\text{Total Assets}} \dots\dots\dots (ii)$$

According to the World Bank Report (2019) and Ngowi (2015), the macroeconomic variables that have the greatest influence on company performance are the exchange rate, the GDP, the interest rate, the inflation rate, and the money supply. In this study, these variables, as well as firm size, age, and business diversification, served as control variables. Table 1 depicts the variables and their projected values.

Table 1: Description of variables and their expected signs

Variables	Measurement	Type of variable	Expected sign
Return on Asset (ROA)	Profit before tax/ Total Assets	Dependent	
Gross Domestic Product (GDP)	Final output of goods and services.	Independent	(+/-)
Interest Rate (IR)	Interest rate during the year computed by Bank of Tanzania (BOT)	Independent	(+/-)
Inflation Rate (IFR)	Consumer Price Index (CPI) annual percentage changes.	Independent	(+/-)
Money Supply (MS)	Volume of Tanzania Shillings in the economy	Independent	(+/-)
Exchange rate (EXR)	Exchange rate during a year between USD	Independent	(+/-)

	and TZS		
Firm Size (FS)	Natural logarithm of total assets in the period	Control	(+/-)
Firm Age (FA)	Number of years since incorporated till the period of study	Control	(+/-)
Geographical diversification (GDiver)	1 for some diversification; 0 for none	Control	(+)

Diagnostic Tests

The null hypotheses of normality, multicollinearity, heteroscedasticity, and autocorrelation were examined using diagnostic tests. These tests were conducted before the regression analysis to determine whether or not the data satisfied the requirements for the regression analysis. (Kennedy, 2008; Bryman & Cramer, 2001).

Normality

In determining normalcy, skewness and kurtosis are calculated (Gujarati, 2004). Normally distributed data are said to have a skewness of 0 with an acceptable range of -1.0 to +1.0 and a kurtosis range of -3.0 to 3.0. (Rehman, 2016). As depicted in Table 5, the results of this study indicated that the skewness of ROA was within the acceptable range of skewness (-0.72) and that the kurtosis value was also within the acceptable range (2.74), favoring normality and other variables falling within the acceptable range for skewness and kurtosis respectively.

Multicollinearity Test

Using a Pearson correlation matrix, the multicollinearity hypothesis was examined. When the correlation coefficients between variables are either 0.90 or 0.90, multicollinearity is presumed to occur. (Field, 2013). When two variables are highly correlated, multicollinearity axioms are violated. Since both variables measure the same effect, one must be deleted to reduce redundancy. Table 2 displays the Pearson correlation matrix for the variables under investigation.

Table 2: Pearson Correlation matrix for independent and dependent variables

Variables	ROA	Gross domestic product	Interest rate	Inflation rate	Money supply	Exchange rate	Geographical diversification	Firm size	Firm age

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ROA	1								
Gross	-								
domestic	0.097	1							
product	8								
Interest rate	0.189	-0.2567	1						
Inflation									
rate	0.113	0.1416	-0.0918	1					
Money	0.093			0.488					
supply	7	-0.0836	0.2985	2	1				
	-			-					
Exchange	0.278	0.317	-0.6404	0.559	-0.4821	1			
rate	4			1					
Geographic									
al	0.252			0.033		-			
diversificati	5	-0.0693	0.1469	3	0.0964	0.167	1		
on						4			
Firm size	0.238			0.153		-			
	7	-0.0111	-0.0582	8	-0.0455	0.070	-0.1147	1	
						1			
Firm age	0.283			-					
	5	-0.0234	0.0106	0.045	0.032	0.007	0.5606	0.006	1
				7		3		3	

Since there was no reason to be concerned about multicollinearity between the variables in Table 2, all of them were preserved. This was demonstrated by correlation coefficients that were within the allowed range (+0.9 or -0.9). Moreover, Variance Inflation Factors (VIFs) were utilized to assess multicollinearity. As seen in Table 3, multicollinearity was not an issue, as the VIF values were less than 10. This result is supported by Gikombo and Mbugua (2018). According to them, VIF must exceed 10 if there is a multicollinearity concern.

Table 3: Variance Inflation Factor (VIF)

Variabl	Exchan	Inflatio	Interes	Firm	Geographic	Money	Gross	Firm

es	ge rate	n rate	t rate	age	al diversificati on	supply	domestic ic produc t	size
VIF	6.95	4.84	4.25	1.9	1.85	1.65	1.53	1.1
1/VIF	0.14389	0.2065	0.2351	0.5254	0.540542	0.6074	0.65182	0.9084
	5	14	24	38		97	2	23

1.3.3 Heteroscedasticity Test

In addition, heteroscedasticity was evaluated by searching for residuals with constant variance. The Breach-Pagan/Cook-Weisberg test was used to determine whether or not this assumption was valid. According to Biorn, the heteroscedasticity assumption is met when the p-value is greater than 0.05. (2017). the chi2-statistic p-value for ROA (3.68), which was 0.0652, exceeded the significance level of 0.05. Therefore, the null hypothesis was correct, and ROA did not have an issue with heteroscedasticity.

Autocorrelation test

In addition, autocorrelation was investigated. The autocorrelation assumption is satisfied when the values of identical variables do not vary in the same way across time (Pallant, 2010). This demonstrates that historical values cannot be used to predict the future. Using the Wooldridge (2002) test, this assumption's validity was determined. If the p-value is more than 0.05, the hypothesis is valid. In this investigation, the p-value of the F-statistic (0.182) was 0.6739, which exceeded the significance threshold of 0.05 for ROA. Therefore, the validity of the null hypothesis was confirmed. As a result, ROA experienced no issues with first-order autocorrelation.

Hausman test

The Hausman Specification Test was utilized to pick between the Random Effect (RE) model and the Fixed Effect (FE) model during data analysis. The RE model implies the group's average score is randomly selected from the population, whereas the FE model believes the group's average score is fixed. Table 4 details the outcomes of the Hausman Specification.

Table 4: Hausman test for RE model

Return on assets (ROA)	chi²(8)	2.43
	Prob >chi ²	0.9320

The difference between Prob>chi2 and the alpha level threshold of 0.05 is 0.9321, which is greater than the significance level of 0.05, as shown in Table 4. This suggests that the null hypothesis (Ho) was true and that coefficient differences were not consistent. This demonstrates that each company's faults were distinct, ad hoc, and unrelated to its performance. Therefore, it was found that the random effect model was adequate for our investigation

Empirical Results and Discussion

Descriptive statistics on macroeconomic variables and performance of firms

The purpose of the study was to examine the effect of macroeconomic conditions on the performance of publicly traded companies. Both dependent and independent variables were examined. To provide a thorough overview of the variables, a descriptive analysis was performed, which included the computation of means, standard deviations, minimum and maximum values. Table 5 contains descriptive data for the dependent variable (ROA), the independent factors (GDP, interest rate, inflation rate, money supply, and exchange rate), and the control variables (firm size, firm age, and geographic diversity).

Table 5: Descriptive results on independent and dependent variables

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
Return on assets	265	12.1973	25.0267	-163.77	69.26	-	2.74711
		1	4			0.72687	5
						1	
Gross domestic product	265	3.18973	0.70492	1.29	4.34	-	2.52685
		6	5			0.28444	4
						3	
Interest rate	265	6.7963	0.99047	5.46	8.92	0.77013	2.53575
			6			61	6
Inflation rate	265	8.61502	3.42468	5.17	16	0.81938	2.45675
		2	4			06	3
Money supply	265	22.5261	1.18726	20.09	24.87	-	2.85128

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		2	3			0.33444	4
						04	
Exchange rate	265	1789.49	394.497	1196.31	2288.2	-	1.45158
		1	2			0.02659	9
						89	
Firm size	265	7.69608	1.10545	4.67472	10.1388	-	2.08439
		9	5	4	7	0.21976	2
						17	
Firm age	265	23.5682	17.1603	0	69	0.99097	2.02482
Geographical	265	8	2	0	1	44	4
diversification		0.55947	0.49754			-	1.05740
		14	77			0.23958	2
						63	

The average value of the dependent variable (ROA) in Table 5 was 12.20, which was less than its standard deviation of 25.03. This demonstrates the large range of ROA values, with the lowest number being -163.77 and the highest value being 69.26. The mean value of GDP was \$3.19 more than its standard deviation of \$0.70, and it ranged from \$1.29 to \$4.34 based on the results of the independent variables. The average interest rate was \$6.80, with a standard deviation of 0.99. The lowest and highest figures were 5.46 and 8.92, respectively. The Inflation Rate (IFR) had a standard deviation of 3.42, with minimum and maximum values of 5.17 and 16, respectively. The standard deviation of Money Supply (MS) was 1.19 and the mean value was 22.53. The minimum value was 20.09, while the maximum value was 24.87. The standard deviation of Exchange Rate (EXR) exceeded its mean of 1789.49. Minimum possible value was 1196.31, and maximum possible value was 2288.2. The averages for Firm Size (FS) and Firm Age (FA) were 7.80 and 23.6 years, whereas the average for Geographical Diversity (GD) was 0.50. (FA).

Regression analysis results on macroeconomic variables and firm performance

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The researcher conducted a regression analysis utilizing the Random Effect model as a reference point to estimate the impact of macroeconomic conditions on the performance of DSE-listed enterprises. Three estimations, labeled 1, 2, and 3, were conducted to determine the reliability of the model's results. To see if the findings remained unchanged, control variables were subtracted from each estimation. Table 6 provides a summary of the results of the analyses.

Table 6: Baseline model on macroeconomic variables affecting firm performance

Variables	ROA	ROA	ROA
	1	2	3
Gross domestic product (GDP)	21.1888*** (8.180)	19.8419** (8.158)	16.5484** (8.184)
Interest Rate (IR)	-24.2172* (13.642)	-25.4481* (13.670)	-23.7600* (13.560)
Inflation Rate (IFR)	5.3376*** (1.929)	5.6335** (2.392)	5.0629*** (1.926)
Money Supply (MS)	11.5413* (7.009)	9.4025* (5.681)	9.7485* (5.732)
Exchange Rate (EXR)	-0.0649** (0.028)	-0.0607** (0.028)	-0.0614** (0.028)
Firm size (FS)		2.9965** (1.395)	3.1074** (1.391)
Firm age (FA)	0.4118* (0.242)		
Geographical diversification (GDIVER)	33.9133** (14.839)	31.4181** (13.172)	
Firm dummy	Yes	Yes	Yes
Firm dummy	Yes	Yes	Yes
Constant	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)
Observations	265	265	265

Standard errors in parentheses Key: * Significant at 10%, ** significant at 5%, *** significant at 1%

Table 6 provides a summary of the baseline model findings (RE) when ROA was the dependent variable. The baseline model was executed with three estimations to verify the consistency of the reported results. GDP, IFR, and MS had positive coefficients, whereas IR and EXR had negative coefficients across all three estimations. In contrast, all calculations revealed that all control variables (FA, FS, and GDIVER) had positive coefficients.

Regarding Gross Domestic Product (GDP), Table 6's findings demonstrated a positive effect between GDP and firm performance. This was observed in each of the model's three estimations. This implies that a growth in GDP promotes an increase in firm profitability and attracts an influx of investors to the capital markets, which positively impacts the performance of listed firms. These findings are consistent with those of Tuncay & Cengiz (2017) and Ismail et al. (2018), but they contradict those of Gatsimbazi et al. (2018), who discovered that GDP had a negative effect on company performance. Despite the fact that reality demonstrates that GDP affects firm performance, changes in circumstances and economic policies can lead to contradictory results. The findings confirm the Open systems theory, which contends that because a company operates in an open environment, its operations and performance are likely to be affected by macroeconomic variables that are beyond the control of management.

The findings verify the claims of key informants who asserted that when a country's GDP rises, it draws improved performance of enterprises via an increase in investors who bring more income to firms as well as an increase in consumption among the population. For instance, a key informant stated,

"Improvement in GDP signifies improvement in country output, the capacity to consume, and, consequently, more revenue for the corporation" (Broker Representative, December 2021).

The findings given in Table 6 indicate that interest rate (IR) has a substantial negative connection with company performance. In all three estimates of the baseline model, the outcomes were consistent. The findings suggest that as interest rates rise, investors gravitate toward fixed-interest investments (treasury bills and bonds) in the context of capital markets (share). In addition, an increase in the interest rate raises the cost of borrowing for businesses, which

reduces their profit margins and, ultimately, their performance. These results are consistent with those of other researchers (Alibabae & Khanmohammadi, 2016; Ismail et al., 2015). On the other hand, the results contradict the findings of Ismail et al. (2018) and Gatsi et al. (2013), who demonstrated that interest rate had a considerable beneficial effect on business performance. This discrepancy may be attributable to varying economic policies in the nations where study was conducted.

Similar to these findings, a number of interviews with various key informants revealed that the rise and fall of IR has both positive and negative effects on the firm's performance, in the sense that when interest rates rise, it encourages investors to switch to fixed investments, which reduces the firms' liquidity. In addition, an increase in IR on borrowing raises corporate borrowing costs, causing firms to use a portion of their profits to repay bankers, so reducing their performance. In support of this, a senior official from a publicly traded company was quoted as saying,

"The higher the interest rate, the higher the cost of borrowing, which can have a detrimental impact on a company's growth and consequently its performance" (Firm representative, December, 2021).

According to the findings presented in Table 6, IFR had a favorable and statistically significant influence on business performance. The results were consistent across all three estimations of the baseline model. The data suggest that inflation expectations increase money supply. Consequently, as inflation is anticipated, an increase in prices would also boost earnings, leading firms to pay more dividends and thereby increasing the price of shares, which will result in an overall improvement in firm performance. The findings are congruent with those of Al-Homaidi et al. (2019) and Rehman (2016), but discordant with those of Dewi et al. (2019), Gatsimbazi et al. (2018), and Alibabae & Khanmohammadi (2016), who reported a negative connection. These results corroborate the Open Systems Theory's thesis that IFR, a component of the macroeconomic environment around the company, has both positive and negative effects on firm performance. The direction of IFR determines whether the effect is positive or negative.

As a means of validating these findings, interview sessions with several key informants indicated the same trends, namely that inflation rate damaged the performance of enterprises since it

pushed up high expenses quicker than firms could pass them on to customers. This could have a detrimental effect on company earnings.

In addition, Table 6's findings regarding money supply reveal that money supply had a favorable effect on business performance, and the results were consistent across all three estimations. The results indicate that an increase in money supply has cascading consequences on the economy. As the money supply grows, it produces a rise in the demand for money and the expansion of economic activity, as well as an increase in cash flows that leads to a rise in stock values. In a similar manner, economic expansion coming from increasing stock money growth causes firms to expand their operations, resulting in larger sales and profitability, and subsequently a higher dividend payout, which is indicative of improved firm performance. The outcomes concur with those reported by Haider et al (2018).

The results of Exchange Rate (EXR) as shown in Table 6 suggest that EXR rate had a significant negative effect on firm performance, and this pattern was observed in all three estimations conducted with the baseline model. The findings suggest that currency stability has a bigger impact on business performance in the sense that it attracts international capital market investors. And vice versa, the greater the influx of foreign investors, the more stable the currency. Similarly, the higher the EXR, the weaker the performance of local enterprises engaged in international trade. These results parallel those of Rehman (2016), Gatsimbazi et al. (2018), and Zeitun et al (2007). In contrast, Alibabae & Khanmohammadi (2016) and Ismail et al. (2015) discovered a favorable association between exchange rate and company performance. The results of interviews with key informants revealed the same patterns. As an example, one of them was cited as saying:

"The exchange rate influences the market performance of a company. Taking into account that our market is open to international investment, a stable exchange rate may attract investors since it protects them from exchange loss, resulting in a rise in the share price of the company and an increase in its return on assets" (Senior Officer, December 2021).

Hypothesis testing results on effect of macroeconomic variables on firm performance

In testing the hypothesis for this study, the researcher's own hypothesis was evaluated. According to the null hypothesis, macroeconomic variables have no effect on the performance of firms listed on the Dar es Salaam Stock Exchange. The effect of macroeconomic factors (GDP, IR, IFR, EXR, and MS) on firm performance can be inferred from the fact that all five investigated variables had a substantial effect on firm performance. The results led to the rejection of the null hypothesis and the validation of the alternative hypothesis. Thus, it can be concluded that macroeconomic variables impact the performance of DSE-listed firms.

Table 7: Summary of results of measured variables

Variable	Results	Remarks
GDP	At 0.05	Statistically significant
IR	At 0.1	Statistically significant
IFR	At 0.01	Statistically significant
MS	At 0.1	Statistically significant
EXR	At 0.05	Statistically significant

Robustness check for the effect of macroeconomic variables on firm performance

To assess the robustness and consistency of the results obtained from the baseline model employing the random effect model, the researcher conducted additional study using the two windows accessible at DSE. The MIM window, which had sixteen firms, and the EGM window, which had five firms, are the windows (DSE, 2018). In this analysis, the researcher employed variables identical to those in Table 6's baseline model. ROA was used as the dependent variable as a proxy for firm performance, whereas GDP, IR, IFR, MS, and EXR were employed as treatment variables. In addition, business size, age, and geographical diversity served as control factors. The results of this analysis are shown in Table 8.

Table 8: Analysis by Window

	ROA	ROA	ROA	ROA
Variables	1	2	1	2
	MIM	MIM	EGM	EGM

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Gross Domestic Product (GDP)	22.5682** (9.863)	22.5536** (10.006)	10.7867** (5.078)	12.5789** (6.137)
Interest Rate (IR)	-30.8909* (16.668)	-30.9156* (16.981)	-25.4481* (13.67)	-26.6604* (13.786)
Inflation Rate (IFR)	5.8171** (2.347)	5.7879** (2.385)	5.8584*** (2.105)	5.5836*** (2.061)
Money Supply (MS)	11.7510* (6.655)	11.1992* (6.727)	9.3973* (5.552)	9.3935* (5.496)
Exchange Rate (EXR)	-0.0737** (0.034)	-0.0743** (0.035)	-0.0578** (0.025)	-0.0547** (0.025)
Firm Size (FS)		3.5751** (1.648)	2.9965** (1.395)	
Firm Age (FA)	5.0954** (1.427)			5.8051*** (1.032)
Geographical diversification (GDIVER)	18.9190** (8.000)		16.7177** (8.027)	
Time Dummy	Yes	Yes	Yes	Yes
Firm Dummy	Yes	Yes	No	No
Constant	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Observations	206	206	59	59

Standard errors in parentheses Key: * Significant at 10%, ** significant at 5%, *** significant at 1%

Table 8 presents two estimations for each window based on the findings of the robustness test. The results indicate that there was consistency between the results reported in the baseline model and those in the robustness check based on the two windows presented previously. In this sense, the acquired results are convincing in their robustness and consistency. Thus, the null hypothesis was rejected further.

Conclusions and Recommendations

Conclusions

This paper sought to examine the effects of macroeconomic variables on firm performance in Tanzania. The study found that all macroeconomic variables affected performance of the sampled listed firms. The findings imply that, despite the fact that these factors are out of the firms' management control, there is a need for firms to have a clear understanding of the behaviour of these factors. This is because such factors surround and effect the business in either positive or negative ways. Thus, understanding these variables will enable firms to think ahead, formulate and implement better and mitigating strategies. Firms that have learnt to accommodate their surrounding business environment operate optimally, encourage the firms to innovate and increase productivity, maximize the level of shareholders, and this ultimately leads to firm's better performance. Therefore, managers and other related stakeholders need to know that there is a direct relationship between macroeconomic variables and performance of listed firms because more money in the economy; facilitated by money supply, interest rate, inflation rate, GDP, and exchange rate; leads to more public participation in the equity market which enhances an increase in firm performance.

Recommendations

In line with the findings obtained and the above conclusions, the following recommendations are given. Since GDP has a positive effect on firm performance, it is recommended that the government; through the Ministry of Finance and Planning, Bank of Tanzania and other regulatory bodies; should ensure that they create friendly policies, regulations and environment that will increase productivity of individual firms in the country. Such increase will foster GDP growth and hence promote firm performance.

Interest rate was observed to have a negative but significant effect on firm performance. This implies that the higher the interest rate, the lower the firm performance. In this regard, it is recommended to the Central Bank (BoT) to ensure that interest rate is not high as higher rates may be exploitative and may not stimulate growth of specific firm performance. Similarly, firm managers are urged to consider interest rates in making borrowing decisions lest tremendous losses occur to their firms.

The government, through the Ministry of Finance and Planning and BOT, should ensure that inflation rate is under control so that it brings positive impact on firm operations and

performance. Arresting inflation rate in the country will have positive contribution to individual firms and to the country's economy. This could be arrested by enacting policies and strategies that control money supply in the economy.

Exchange rate was observed to have a negative effect on firm performance. Thus, it is recommended to the Bank of Tanzania (BoT) to ensure that the country's currency is stable. This means that the exchange rate will be stable as well. In this regard, the country will help firms which have maximum power of securing resources from foreign markets. Similarly, a stable exchange rate will attract foreign investors in the capital market thereby influencing firm performance. Management boards of listed firms are urged to take serious initiatives to study and forecast the behaviour of macroeconomic variables that surround their firms. By so doing, the managers will design effective strategies to evade these factors thereby maximizing their firms' performance.

Lastly, we recommend that higher learning institutions should put more emphasis in designing curricular that will equip the future firm managers with adequate knowledge of the macroeconomic variables since the immensely complicated functioning of the modern economy can be better understood with the help of studying macroeconomics. With such studies firm managers will gain better knowledge of how the economy as a whole works and how the level of national revenue and employment is determined by the amount of aggregate demand and aggregate supply and then they can think and ponder on the various ways it might affect their businesses and how to employ such variables to their advantage. By gaining a deep understanding of the elements that have a role in the expansion of a nation's economy and analysing the means by which the most expansion can be accomplished and maintained firm managers might sharpen the competitive edge and enhance firm performance. But all that can only be perfectly done with a proper theoretical base which can be obtained from higher learning institutions,

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Financial Cooperatives in Tanzania: A Viable Option for Increasing Financial Inclusion

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Abstract

Financial cooperatives are important players in the world financial sector; which reaches the urban and rural poorest people and have a significant economic impact. In developing countries, financial cooperatives have been highlighted as community-based organizations that have outreach to both rural and urban people, especially farmers and micro, small and medium enterprises, which emphasizes their importance in meeting the goals of financial inclusion. The study provides overview of financial cooperatives as a viable option for increasing financial inclusion in Tanzania. The study is based on the analysis of data collected from Tanzania Cooperative Development Commission, financial cooperatives and based on experience of authors in the sector. The study found main laws governing cooperatives in Tanzania include the Cooperative Societies Act, 2013, Cooperative Societies Regulations of 2015, the Cooperative Audit and Supervision Act of 1982, Microfinance Act of 2018 and Microfinance Regulations of 2019. The study findings shown that the role of financial cooperatives in financial inclusion include providing investment opportunities through buying shares, access to loans, saving their money and making deposits. Also, the study found financial cooperatives are unique in their role of financial inclusion compared to other financial institutions. Their uniqueness are financial cooperatives being closer to where people live, open and democratic member control, loan procedures building saving culture, provision of education and training, easy access of loans and generating income which is received as dividends. Besides, these achievements the study found the number of women enjoying financial services is lower compared to men, this call for the government through Tanzania Cooperative Development Commission cooperating with financial cooperatives and various stakeholders to sensitize women to join SACCOS.

Keys words: *Cooperatives, Financial Cooperatives, financial inclusion, and Tanzania*

Introduction

Financial inclusion has become increasingly proposed by scholars and policy makers as an important enabler to reducing poverty and increasing prosperity among people, and has been identified as essential tool in achieving 7 of the 17 Sustainable Development Goals (World Bank, 2022). Financial inclusion includes individuals and businesses access to useful and affordable financial products and services that meet their needs such as payments, transactions, savings, credit and insurance. Access to financial services varies from developed to developing countries and urban to rural areas. In developing countries, people are less financially inclusive which makes people to continue living in poverty in these countries (Cicchello, Kazemikhasragh, Monferrá & Girón, 2021). Financial inclusion is a fundamental pillar of development policy in most developing countries around the world and this is a result of the realization that an inclusive financial system is crucial for reducing extreme poverty, gender inequality, and contributes to the attainment of sustainable development goals and the Africa we want (Eton, BC & Fabian, 2020; Isukul and Tantua, 2021; Africa Union, 2022). Government and development stakeholders globally have made various efforts towards financial inclusion and 1.2 billion adults worldwide have gotten access to an account between 2011 and 2017, whereby, in 2017, 69% of the world's adults had an account (World Bank, 2022). This shows access to financial services is not equally accessed and thus some of the people especially the poor have no account. Over the last years, the World Bank, scholars and other development stakeholders have been celebrating those the world's adults had an account (World Bank, 2022). The question has been what can be saved in these accounts and what role can play for people living in rural areas to have access to credit to meet their day to day needs and invest their money sustainably. This shows the need of having financial model which can ensures financial services are delivered to individuals and business in a responsible and sustainable way. One of the financial models is financial cooperative and this paper provides its uniqueness against other financial models. Financial cooperatives are nonprofit organizations that benefit their members and are important players in the world banking system, which reach the poorest people and have a substantial economic transformation of both rural and urban communities (United Nations Development Programme, 2015). According NCBA (2022) globally, there are over 75,000 financial cooperatives in 109 countries with 260 million members; these financial cooperatives play a significant role in the financial sector of many countries. Financial cooperatives are one of the formal organizations working for

financial inclusion to communities especially in rural areas where other financial institutions have not targeted serving (Ruete, 2014). Also, remain important drivers of financial inclusion through providing financial services to poor and middle-income people in the community which cannot be done by traditional banking (Zikalala, 2016; Wagura & Shavulimo, 2017; World Bank, 2018; Ndegwa, 2020).

Tanzania is one of the developing countries that have made notable progress in the expansion of access to formal financial services, which increased from 58% in 2013 to 65% in 2017, largely driven by financial cooperatives. In this context, financial cooperatives are Savings and Credit Cooperative Societies (SACCOS). Besides this progress it has been reported that there is unequal access to financial services between rural and urban areas. Unequal opportunities of financial services undermine the important role of financial sector in poverty alleviation and economic development (Were, Odongo & Israel, 2021). According to the 2012 Population and Housing Census, 53.3% of the total workforce engaged in farming related activities or informal businesses including Micro, Small and Medium Enterprises (MSMEs). In the farming and business arena, owners of MSMEs and farmers have faced major barriers to growth including limited access to finance and effective use of financial services (Mori and Richard 2012; National Council for Financial Inclusion, 2017; Isaga, 2018; Gideon, 2019). Financial cooperatives in this context are viewed as a viable option towards financial inclusion and business growth of women especially in developing countries where the majority of the people are poor (Pasara, Makochehanwa & Dunga, 2021).

Various studies have pointed SACCOS differently, Otieno (2019) acknowledged that SACCOS have created the capacity to fight poverty among members, promoted equity, mobilizes savings and investment of members through access to affordable loans, reduced financial exclusion and creates employment opportunities in Kenya. Harelimana (2021) in his study on impact Umurenge SACCO to financial inclusion in Rwanda found SACCOS has ensured access to financial service by increasing trend of account holders, access loans and deposits. Zikalala (2016) post that SACCOS play an important role in the financial systems of many countries, they are key sources for savings and credit for MSMEs, and thus maximizes benefits to members. Mauerman and Randall (2018) highlight that SACCOS provides financial education to their members and provides avenues to members for saving regularly, deposit and getting credit for social economic motives. Also, Anania, Gikuri & Hall (2015) and Were et al. (2021) documents

that financial cooperatives lift the poor out of poverty through financial inclusion and have motivated the widespread adoption of policies, programmes, and reform measures that aim to improve access to financial services. Services mentioned by scholars also are provided by banks, the question is what differentiates SACCOS from other financial institutions in ensuring financial inclusion to both people in urban and rural areas? This was the bases of conducting this study.

Methodology

Research design and Sampling

The study used a cross-sectional research design, which enabled collection of data from various SACCOS at a single point in time, in this context different SACCOS were studied its data analyzed. The study population was 3,946 SACCOS registered in the country, as such the study sampled 655 licensed SACCOS located from various regions in Tanzania. These SACCOS were selected since are only SACCOS licensed based on Microfinance Act of 2018 requirements. The study used purposive sampling to sample key informants from five (5) SACCOS and Tanzania Cooperative Development Commission (TCDC); these include managers and government officials dealing with supervision of SACCOS. This technique enabled the researchers to collect more data out of the data that could have been collected using other techniques.

Data Collection

The study collected both primary and secondary data, primary data involved data collected from the study respondents. These data were collected using interview method, which were guided by interview guiding questions that were asked to key informants. This enabled the study to collect detailed information which was obtained by asking probing questions and requesting additional information. Documentary data included data collected from various reports including forms submitted by SACCOS monthly to TCDC and various laws governing SACCOS. The study also reviewed other studies done by other scholars for study underpinning and linking with study findings collected.

Data Analysis

Analysis of data was done separately depending on the nature of data such as qualitative and quantitative data. As such, for quantitative data, descriptive statistics was processed to provide a simple summary of the data in form of frequency and percentages. Qualitative data were documented from a written source which is reviewed throughout and also were obtained from

interviews with key informants. In this context, direct quotes were taken from key informants for easy understanding and gaining new insights. The study considered triangulation important to cross check the validity and truth of the data collected from different actors. This was done by combining several methods and empirical materials in this study, which helped the study to overcome the weakness or intrinsic biases and the problems that come from a single method and empirical study.

A mixed approach of data collection, analysis, and interpretation was adopted by the study. This involved mixing both quantitative and qualitative methods of data collection and analysis. Mixing different methods strengthened and revealed various aspects of empirical reality and defused the shortcomings of using one method in research.

Reliability and Validity of Data

To ensure the reliability of the data collected, pilot study was done, whereby one SACCOS was selected and data were collected. This helped to test the research instrument, familiarization and subsequently questions were reviewed to ensure all are focused on the central issues of the study and captures data type. To ensure validity, the study deployed multiple sources of evidence, namely documentary review, interviews and practical experience of authors. The multiple sources of evidence provided convergence of facts during the data collection process and analysis. Similarly, the extent of the falseness of data during data collection was controlled by approaching right people who have the right information.

Findings and Discussions

Legal framework governing financial cooperatives in Tanzania

The main legislation which governs cooperatives in Tanzania Mainland is the Cooperative Societies Act No. 6 of 2013. This law establishes the Tanzania Cooperative Development Commission (TCDC) which is responsible for registration and supervision of cooperatives and coordinating promotion of cooperative development activities. The Cooperative Societies Regulations of 2015 made under the Cooperative Societies Act, 2013 operationalize the Act through its detailed provisions on matters of formation, management and regulation of cooperatives. Along with the Cooperative Societies Act, the legal framework also involves the Cooperative Audit and Supervision Act No. 15 of 1982 which establishes the Cooperative Audit and Supervision Corporation (COASCO) mandated with auditing of all cooperatives. There is also the Microfinance Act of 2018 which governs the licensing and some aspects related to

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management and supervision of financial cooperatives which are classified under Tier 3 Microfinance Institutions. The Microfinance Act is administered by the Bank of Tanzania (BoT). However, BoT's regulatory powers over SACCOS have been delegated to TCDC. There are also other laws which govern different aspects of cooperatives or the economic activities performed by cooperatives, laws governing taxation matters and contracts. Table 2 summarizes main laws governing cooperatives in Tanzania.

Table 2: Main Laws Governing Cooperatives in Tanzania

Law	Nature of regulation
The Cooperative Societies Act, 2013.	Applies to all cooperatives on matters of registration, management and regulation.
The Cooperative Societies Regulations, GN No. 272 of 2015.	Provides more details on the provisions of the Cooperative Societies Act of 2013 on matters of formation, management and regulation of cooperatives.
The Cooperative Audit and Supervision Act No. 15 of 1982.	All cooperatives must be audited by COASCO, except where the Registrar of Cooperatives approves a private auditor.
Microfinance Act, No. 10 of 2018.	Regulates the licensing of all types of Microfinance Institutions, including SACCOS.
Microfinance (SACCOS) Regulations, 2019 (GN No. 675 of 2019).	Provides for detailed procedures for licensing, inspection and supervision of SACCOS. It also provides for consumer protection.

In addition, cooperatives societies in Tanzania also are governed by guidelines and seculars provided by the Registrar based on section 81 of Cooperative Regulations of 2015. These are important in governing cooperatives societies' operations and businesses.

The role of Financial Cooperatives in Enabling Members' Access to Financial Services

According to TCDC in Tanzania there are 3,946 SACCOS which have been registered according to Cooperative Societies Act No. 6 of 2013. According to Microfinance Act No. 10 of 2018 all SACCOS must get license to provide services to their members. As such, up to April 2022 only 655 SACCOS had received license, others are still in process of fulfilling conditions required. Some of the conditions include having the lending policy, evidence of adequate safekeeping facilities and security for cash in the business premises, proof that the SACCOS has employed or has contracted an internal auditor responsible for monitoring, among other duties, the correct and effective implementation of the internal control system; and proof that the SACCOS has a Management Information System and among others.

The study findings show that SACCOS enable members to make savings and deposits, access loans, and invest through buying shares (Table 2).

Table 2: Values of financial services

No. of SACCOS	655
Members	377,959
Capital (Tshs)	155,579,502,042
Loans to Members (Tshs)	633,615,390,691
Total Savings (Tshs)	549,193,489,851
Total Deposits (Tshs)	39,093,070,418

Source: TCDC (May, 2022)

Savings

Savings in SACCOS is compulsory and is done based on the bylaws and members' plans. Some of the SACCOS savings is done directly from salaries of members; this is done by all members agreeing on a minimum amount of savings which is reduced from their salaries. Also, in some SACCOS, members have agreed to save a certain amount of money at certain period of time, which can be monthly, quarterly and among others. Saving in SACCOS can be done at any time and a member can have a plan of saving his/her money at a certain period of time. The study findings show that members of licensed SACCOS have saved Tshs 549,193,489,851 which is average of Tshs 1,453,050 to each member. Loans to members in SACCOS are provided based

on amount saved, basically amount of loan taken should not be more than three times of savings, and therefore members are willingly to save to create more opportunity of getting loans.

Loans to members

The primary business of a SACCOS is savings and credit; members join SACCOS to enjoy an opportunity of getting loans from SACCOS. The study findings collected from TCDC revealed that by May 2022 a total of Tshs 633,615,390,691 were loans provided to members which are an average of Tshs 1,676,413 to each member. Loan conditions vary from SACCOS to SACCOS and it depend on the amount of loan provided. Some SACCOS needs collateral to get a certain amount of money, while in others SACCOS there is no need of having collateral. Also, the mode of payment can be directly to the bank account or the amount can be taken in hand to the SACCOS.

Capital

Interviews revealed that SACCOS provides opportunity to members to pull capital together for business and services provision to members. Capital in SACCOS is raised by members buying shares, whereby, number of shares and amount varies from one SACCOS to another based on its bylaws. In this context SACCOS provides avenue to public to invest their money in SACCOS, this investment is directly and members benefits directly through payment of dividends on their shares. Members of licensed SACCOS have invested Tshs 155,579,502,042 through buying shares which is average of Tshs 411,631 to each member. It was found that since SACCOS are located in both urban and rural areas members can easily join SACCOS and buy shares at any time since information on shares are widely available compared to other financial institutions.

Make Deposits

Deposits in SACCOS are voluntary and can be withdrawn at any time; members make deposit based on their future plans, according to the Microfinance Act, 2018 SACCOS members who have deposits are receiving interest on deposits made. Members of licensed SACCOS have bought deposits of Tshs 39,093,070,418 which is average of Tshs 103,432 to each member. The interest rate of paid varies from one SACCOS to another depending to its policy, which is an opportunity to all members of SACCOS.

Uniqueness of SACCOS against other institutions in role of financial inclusion

(i). SACCOS are closer to where people live

In Tanzania there 3,956 wards and there 3,946 registered SACCOS, therefore, in average each ward in Tanzania has a SACCOS which provides services to its members living in the specific areas, this reduces distance to access financial services. Banks normally are found in urban centers especially at district level, where majority of people in rural areas cannot manage to go for the purpose of accessing financial services. Accessing services in their living area enables community members to be sure of getting loans to meet their needs as well as makes savings.

(ii). Open and democratic member control

Financial cooperatives are open to all people who are willingly to join and can reasonably use its services and accept the responsibilities of membership, regardless of gender, religion, race or economic conditions. Also, cooperatives are democratic organizations controlled by their members, who participate in making decisions and formulating policies. Leaders of cooperatives are elected from members who are willingly to be a leader; members have equal voting rights (one member, one vote). Open and democratic member control provides opportunities to all persons who willingly to invest by saving their money and accessing loans. According McKillop, French, Quinn, Sobiech & Wilson (2020) in their study found open and democratic member control shape the management of financial cooperatives and set them apart from shareholder-based banks, also, provide a number of potential benefits including having equal power and rights among members. The Assistant Registrar Supervising SACCOS remarked that

“In all SACCOS any person has an opportunity to join provided has fulfilled the terms and conditions provided by specific SACCOS bylaw. Members have final authority in decision making in matters regarding their SACCOS provided that their decisions are comply with national laws (28 May 2022)”

This shows that SACCOS is one of the models that enable poor people to join and enjoy financial service. In banks, customers have no any right of making decision, only shareholders have rights.

(iii). Loan procedures build saving culture

Savings to financial cooperatives is one of the requirements for members to acquire loans from SACCOS; normally a member should get not more than three times of his/her savings. This has enabled members to have a culture of saving to their SACCOS; this opportunity is not found in banks.

(iv). Provision of education and Training

Financial cooperatives are guided by principles which one of them is provision of education and training to members. In every financial year of the cooperatives there should be budget for providing education and training to members on cooperative matters such as cooperative concept, cooperative management, business development and others. The Bandarini SACCOS' Manager emphasized that

“In our SACCOS we allocate 10% of budget for education and Training purposes, this budget is used for financing provision of education to leaders, management and members. Topics covered include those related to cooperative concept, leadership, cooperative management, business management, entrepreneurship and among others (28 May 2022)”

Financial education provided to members transforms their mindset from poor to good planning and effectively utilizing financial resources and opportunities. This opportunity is not found any other financial institution.

(v). Easy access of loans

Accessing loans from banks requires collateral which has made majority of Tanzanians failure to access loans from banks. Financial cooperatives have several loans options, others requires collaterals while others does not, but many loans are provided using collateral substitutes, like deposited savings and individual guarantors which enable even the poor people to get loans. The TCDC SACCOS' Manager remarked that

“In our SACCOS we provide loans to members and one of the requirements are to have savings which are equivalent to the amount requested, we are not demanding our members to bring collaterals when they apply loans ranging from Tshs 1,000,000 to Tshs 4,000,000 (29 May 2022)”

This shows that SACCOS provides opportunities to members which cannot be obtained from other financial institutions where loans requirements do not include savings. This savings in this context is investment which can be used to raise fund when needed.

(vi). Stimulates investment through giving dividends

The study found SACCOS providing dividends to members who make savings, borrowing and making deposits to their SACCOS which are not found to other financial institutions. The dividends provided stimulate members to use their SACCOS' services. The TRA SACCOS' Manager commented that

“In our SACCOS one of the services is compulsory savings which gives members an opportunity to build a savings habit and can be used as the collateral to obtain loans. Other benefits of savings generate annual interest on savings, enables a member to obtain a community development loan which is three (3) times the compulsory savings and a member can save whenever gets money (through salary or depositing directly to the SACCOS' account or bank standing order agreement (28 May 2022)”

The URA SACCOS' Manager commented that

“In our SACCOS we have deposit product which enable our members to save their money to meet various needs at any time. The importance of this product is ability of a member to withdraw money from this account at any time and there is no any operating cost, our members gets seven percent (7%) per annum at the rate of five hundred thousand shillings (Tshs 500,000) available in his account (28 May 2022)”

This shows that deposits of members are part of investments which generates income. In rural areas farmers and SMMES have opportunity of using part profit for investments in SACCOS, whereby, in turn get dividends and create more chance or room of getting large amount of loans which may be used to expand their business and meeting their needs.

The study findings on role of financial cooperatives in financial inclusion corroborates findings elsewhere (Zikalala, 2016; Mauerman and Randall, 2018; Otieno, 2019; Harelimana, 2021).

Financial cooperatives uniqueness in different countries is almost the same based on the fact that all comply with cooperative identity, values and principles. Also, findings support Obadia, 2014; Victor, 2019; McKillop, et al. 2020 that they act as only formal organization that can enable poorest people to access financial services equally and for long time are main sources of credit for members to meet their social and economic needs.

Conclusion and Recommendations

Financial cooperatives play a significant role in financial inclusion in Tanzania. Members of financial cooperatives have access to financial services such as access to loans, buying shares, saving their money and making deposits, and are likely to take strides in poverty reduction than those who have not access. Since financial institutions especially commercial banks excludes majority of people especially farmers and owners of micro, small and medium enterprises who poor. Financial cooperative has proved to be a good model to save these groups, and enable them to meet their economic and business needs, and thus contributing to attainment of sustainable development goals, the agenda 6063 the Africa we want and Development Vision 2025. Besides, these achievements the study found the number of women enjoying financial services is lower compared to men, this call for the government through Tanzania Cooperative Development Commission cooperating with financial cooperatives and various stakeholders to sensitize women to join SACCOS. Also, it was found that 83% of registered SACCOS have not applied license for running their business to comply with country' laws. Therefore, it is recommended to researchers and stakeholders conduct studies and assessment on the reasons for failure to meet this requirement provided, to provide avenue for more people to enjoy financial services. This needs to go in hand with sensitizing these SACCOS to meet required requirements.

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Challenges Facing Customers in Using Nmb Agency Banking Services In Dodoma City, Tanzania

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Abstract

Despite the impressive trend, the issue which arises is whether agency banking has succeeded in achieving the expectations of commercial banks. Therefore, there is a need for agency banking services to be evaluated in the light of their contribution to customer transactions in commercial banks in Tanzania. The study determines the challenges facing customers in using NMB agency banking in Dodoma city. A cross-sectional research design was used to collect data from 87 NMB agencies by using a questionnaire and about 20 customers were involved as the key informants through interviews. The findings revealed the following challenges encountered by customers while using NMB agency banking; network problem, accessibility challenges, security challenges, transaction costs and technical associated challenges. The study concluded that there are some challenges which need to be solved in order to attain customer transactions. It recommended that agency banking should have more money so that those who want to withdraw more should not be forced to go to physical banks in order to reduce the challenge of the accessibility of NMB agency banking services.

Key words: Customers, Nmb agency banking, Agency banking services and challenges

Introduction

Access to financial services is recognized globally as important to financial stability and the integrity of markets (Collard *et al.*, 2016); it is also one of the keys to alleviating poverty and achieving sustainable economic growth. Despite its importance, statistics indicate that approximately two billion of people worldwide still lack access to regulated financial services (Grandolini, 2015). Lack of access to financial services undermines an individual's or household's ability to take responsibility for their financial security, in turn potentially damaging

their well-being. This is particularly when a large percentage of the underserved population is domiciled in remote areas of developing countries where there are no bank branches making it difficult and costly to access financial services.

In the side of the developing world, countries have been increasingly adopting agency banking as a way of providing banking services to numerous unreached populations, particularly low-income families (Ndungu & Njeru, 2014). In Tanzania, the banking sector and its respective services are increasing significantly with their share of total assets increasing to 76.6% in 2020 from 71.6% in 2019 (BOT, 2020). This growth is associated with the seriousness and efforts made by the bank of Tanzania towards supporting the operations of bank agents which are regulated by the Guidelines on Agent Banking for Banking Institutions of 2013, as cited in the Guidelines on Agent Banking for Banks and Financial Institutions of 2017 which made under Section 71 of the Banking and Financial Institutions Act of 2006 that allows commercial banks to offer their services through third-party businesses (BOT, 2017). Banks can now subcontract agents to offer services like account opening, deposits, withdrawals and loan applications on their behalf. hence, allowed banks to increase their presence around the country without the added costs of opening up more branches (CGAP, 2015).

In Tanzania, agency banking is mainly a common phenomenon in only 13 banks which are Cooperative and Rural Development Bank (CRDB Plc.), Equity, Kenya Commercial Bank, Access Bank, National Microfinance Bank Plc, Development Credit Bank, Tanzania Postal Bank, Amana Bank, Efatha Bank, Standard Chartered, Bank of Africa and National Bank of Commercial (BOT, 2020). In 2016, the National Microfinance Bank (NMB Plc) introduced its agency services to reach out to both the banked and unbanked communities across the country. Currently, NMB has over 6000 agents countrywide which makes it the market leader in Agency Banking. Moreover, at least half of the bank's monthly transacting customers use NMB Agency to meet their banking financial needs. Likewise, more than 300,000 non-NMB customers, monthly, use various payment services through NMB Agency located close to them hence; reducing their transaction costs and time (NMB, 2020)

The Bank of Tanzania 2020 annual report identifies that 67% of the total available bank agents are basically located in urban Areas. According to the report, as of March 2020, most available

bank agents (about 51%) are in Dar es Salaam followed by Arusha with a market share of 12.9% and then Mwanza at 11.0 %. On other hand, the Bank of Tanzania (2020) shows that bank deposits and withdrawals, through bank agents, have been increasing since 2014. For example, deposits and withdrawals have increased by over 85% in 2019. This is an impressive trend which virtually supports the growth of financial inclusion.

The NMB agency banking model has been in operation for about 6 years now, having begun in 2015 as per the NMB annual report of 2020. Agency banking empowers bank clients to get to the essential keeping of money administration, withdrawals, installment of bill credit and check card applications, and cell phone saving money administrations among others (Ndegwa, 2017). However, empirical studies to investigate whether agency banking as a financial inclusion tool has improved customer transactions are limited. Therefore, the gap remains on how agency banking services contributed to customer transactions, particularly in the Tanzania context. This study aimed at bridging the existing knowledge gap by determines the challenges facing customers in using NMB agency banking in Dodoma city.

A conceptual framework is a simplified systematic theoretical structure of interrelated components in some schematic form, which portrays the connections between and among variables (Kothari, 2010). It recognizes distinctive sorts of variables to be concentrated on and indicates the nature of the relationship between the independent and dependent variables. In this study, the dependent variable is customer transactions while independent variables are banking agency services such are customer deposits, withdrawing and bill payments as shown in Figure

1

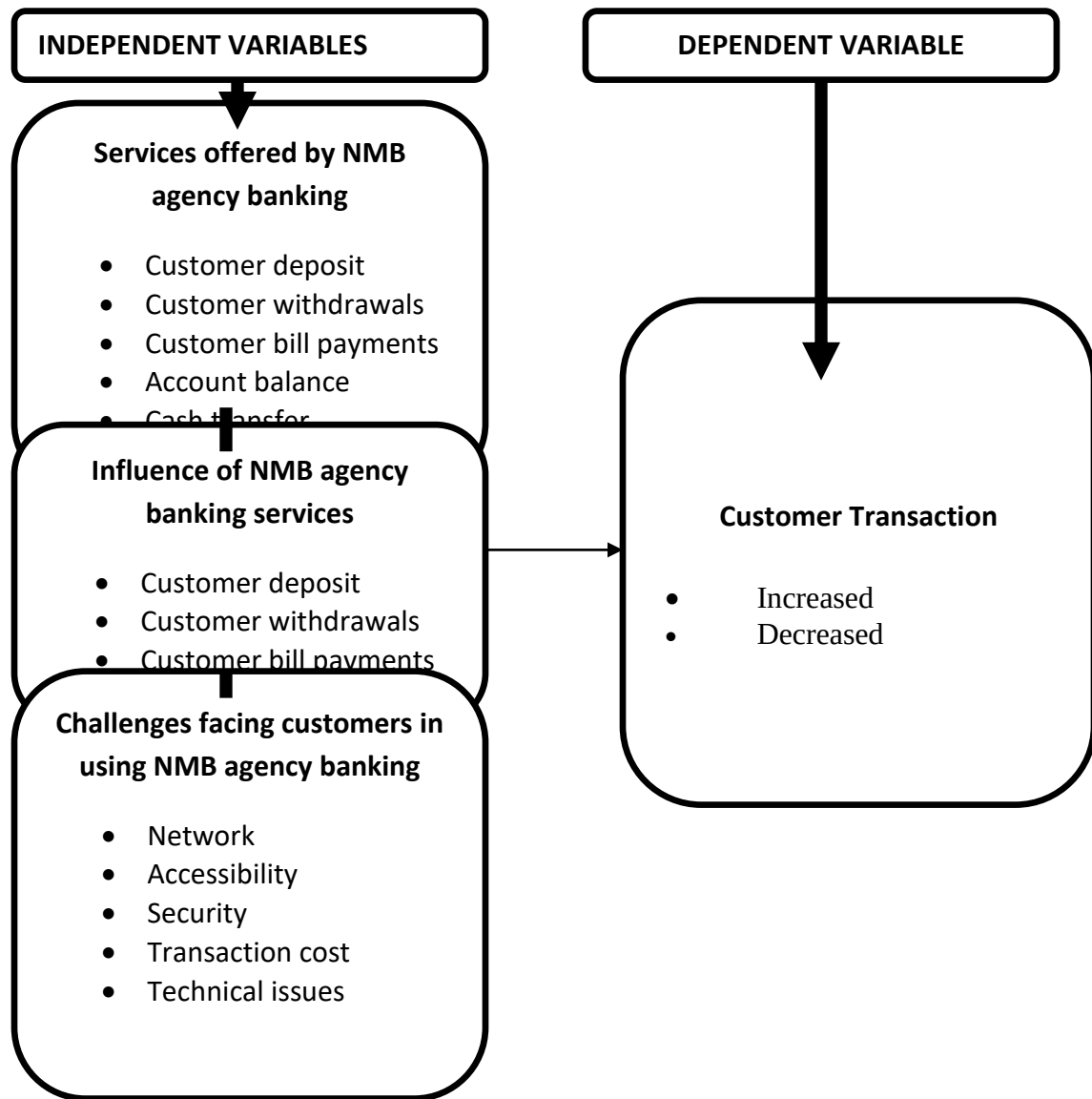


Figure 3: Conceptual Framework of the Study Variables

Source: Theoretical and Empirical Literature Review (Magesse, 2020; Ndyamuhaki, 2020; Kuboja, 2020; Stephen & Barry, 1973, Bhattacharya & Thakor, 1993).

Research Methodology

The target population included all registered agents of National Microfinance Bank Plc in Dodoma city, customers and NMB staffs who are responsible for agency banking. A mixed approach was used whereby both qualitative and quantitative approaches were involved. Qualitative data were collected by using interviews and quantitative data were collected using a questionnaire. A mixed approach was used in this study because it allowed a mixing or a combination of both qualitative and quantitative methods, research ideas, approach and features in a single study as also indicated by Johnson and Christensen (2017). Therefore, a quantitative approach was used to quantify data and use statistics to analyze a data set, while the qualitative approach was used to generate verbal information rather than numerical value.

A cross-sectional research design was adopted in this study. The design was suitable for this study because it allowed the researcher to collect information related to the challenges facing customers in using NMB agency banking in Dodoma city at a single point in time. This design also allowed the researcher to contrast many different variables at the same time. Moreover, it was very faster and cost-effective and thus helped a researcher to complete with guided time and cost.

The sample size of this study constitutes 90 respondents as follows; NMB staffs from departments of accounts, finance, and NMB agents. However customers and head of departments were used as key informants. The study used purposive and systematic sampling techniques to select a sample. Purposive sampling was used to select the head of departments from the finance department, and agency banking department for an interview to get qualitative data. A systematic sampling technique was used to select registered NMB agencies in Dodoma city. In systematic sampling, the researcher used a document of registered NMB agencies whereby the first respondent was chosen randomly while others were chosen based on the interval of ten respondents.

The study used an open ended and close ended questions in the questionnaire used to ensure the reliability of the data collected. The questionnaires were administered by the researcher and two research assistants were involved in the process. The research assistants were selected based on their knowledge of agency banking. This study used structured interview questions that allowed

the researcher and participants to be free for questions and responses.

The interview was used to get information about the services offered by NMB Agency banking and the challenges faced by customers using NMB agency banking in Dodoma city. The information gathered was qualitative in order to support quantitative findings. This method used an interview guide which consisted of a list of questions.

The multiple responses analysis method was used to identify challenges and to measure frequencies and the mode since challenges includes more than one response per participant (Miri-Lavassani *et al.* 2009). Furthermore, qualitative data about the services offered by NMB agency banking and the challenges faced by customers using NMB agency banking that captured from the interview method were analyzed using contents analysis. Using content analysis, researchers quantify and analyze the presence, meanings and relationships of concepts. The following steps were used to analyze qualitative data through content analysis; (i) the major content for analysis was selected, (ii) the researcher provided the units and categories of analysis based on the content, (iii) the researcher provides the rule of thumb based on the importance of the contents, (iv) the researcher coded the text based on the rule of thumb, and (iii) the researcher analyzes the results and draw the conclusions.

Findings And Discussions

This section presents the challenges facing customers in using NMB agency banking in Dodoma city. The following challenges were obtained and discussed below based on their importance to the service offered by NMB banking agency.

Table 1: Challenges Facing Customers in Using NMB Agency Banking

Challenges	N	Percent	Percent of cases
Network problem	68	29.8%	78.2%
Accessibility challenges	37	16.2%	42.5%
Security challenges	64	28.1%	73.6%

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Transaction cost	34	14.9%	39.1%
Technical issues	25	11.0%	28.7%
Total	228	100.0%	262.1%

Source: (Researcher's Data Collection in June, 2022)

As it is demonstrated in Table 1 network problem is the major challenge that facing customers in using NMB agency banking, this factor was confirmed by 78.2% of cases. These results imply that with the presence of a network problem may have a negative effect on customer transactions. These results were supported by qualitative findings which exhibit:

Using agency banking is sometimes not good because of the network problem. For instance when it comes to network problems and you don't have other means except for using agency service, the network problem might cause some troubles in your transactions (Interview with customer on 12th June 2022).

These results are in harmony with those of Khan *et al* (2017) who revealed that perception of trustworthiness and network problem has been found to have no influence on variations in mobile banking adoption.

Another challenge was a security issue which was indicated by 73.6% of cases. This result implies that with the absence of security may affect customer transactions negatively. These results were supported by qualitative findings which exhibit:

We are still received a lot of cybercrime incidents through agency services. As an institution we are working with the police to ensure that the theft issues not only on agency services but also other areas of banking in order to combat the problem (Interview with one of NMB staff on 14th June 2022).

These results are in harmony with those of Bamoriya & Singh (2012) who revealed that customers' security concern is the major barrier to adopting mobile banking services. As far as

preferred services are concerned balance checks are top, as customers prefer information-based services rather than financial services provided by the bank.

Another challenge was the issue of accessibility which was confirmed by 42.5% of cases mentioned accessibility challenges as indicated in Table 1. These results imply that with the presence of accessibility challenges there is high possibility of negative effects on customer transactions.

These results were supported by qualitative findings which exhibit:

We are currently working to ensure that, our customers access the better service and even the problem of network as the organization we are working harder to adopt with accordance of increase number of customers (Interview made with NMB staff on 14th June 2022).

These results are not in harmony with those of Mwando (2013) and Argamo (2015) who revealed that financial services accessibility by customers through banking agencies had a positive impact on the financial performance of commercial banks in Kenya.

Another challenge confirmed by 39.1% of cases was high transaction cost. These results imply that with the presence of transaction cost there is high possibility of negative effects on customer transactions. These results were supported by qualitative findings which exhibit:

There are huge costs imposed during transaction processes that are not affordable to every customer because are not friendly depending on the amount we want to deposit or withdraws (Interview with one customer on 12th June 2022).

These results are in harmony with those of Mwando (2013) and Argamo (2015) who revealed that low transaction costs through agency banking had a positive impact on the financial performance of commercial banks in Kenya.

Finally the findings indicate 28.7% of cases mentioned technical issues concerning technological innovations as one of the major challenges that face customers using NMB agency banking.

These results were supported by qualitative findings which exhibit:

Sometimes the system collapse due to the workload as due to high transactions made by the customers and other work which are internally done by the institution in sending, receiving and other manipulation of the office (Interview made with one of NMB staff on June 2022).

These results imply that with the presence of technical issues there is high possibility of negative effects on customer transactions. These results are not in harmony with those of Kamau (2013) who revealed that technological innovation has led to increased accessibility of bank services through mobile banking, internet banking and agency banking.

Conclusion And Recommendations

Conclusion

Based on the findings of this study, the following study has the following conclusion; Customers' withdraw, deposits, opening the account, bill payments, cash transfers and checking account balances are the most NMB agency banking services because of the easiest to access the customers' transaction more than other services offered by other banking agencies. On the other side using Cash withdrawals through NMB agency banking is more likely to increase customers' transactions than other NMB agency banking services. Furthermore, networking problem affects more NMB agency banking to operate smoothly to improve customers' transactions.

Recommendations

Based on the findings, especially the challenges encountered by customers when using NMB agency banking, the following recommendations were made;

- Agency banking should increase the products they offer to their customers to include credit facilities in order to reduce the challenge of the accessibility of NMB agency banking services, Thus NMB bank plc. As responsible financial institution must make sure the services required for improvement and cost cutting are effective provided.
- Agency banking should have more money so that those who want to withdraw more should not be forced to go to physical banks in order to reduce the challenges of the

accessibility of NMB agency banking services.

- NMB should do more advertising to sensitize the public on the availability and the services of agency banking to reduce the challenges of the accessibility of NMB agency banking services.
- NMB should lower the transaction cost or charges of making the transactions in agency banks to reduce the challenges of the high transactions costs of NMB agency banking services.
- To improve the adoption of agency banking, NMB and commercial banks in Tanzania should improve customers' perception by making more advertisements and increasing promotion activities.
- In order to reduce the security challenges, basic education on the use of technology should be given to both the agents and the bank customers.

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The influence of Bullwhip effect on Fluctuation in the price of Agricultural Products

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Abstract

The trends and causes of fluctuation in the price of agricultural products have been viewed and reported from different perspectives. Along the supply chain of agricultural products, the influence of bullwhip effect on price fluctuation has not been addressed. This study employed a cross-sectional research design and stratified random sampling to assess the influence of bullwhip effect on fluctuation of the price of agricultural products. Data were collected from 296 agricultural supply chain actors at Mbalizi market in Mbeya, Tanzania using a questionnaire survey and supplemented by document review. The influence of bullwhip effect on fluctuation in the price of agricultural products was established by using descriptive statistics (frequencies and percentages). The study revealed that lead time, aspiring to achieve economies of scale, batch ordering system, inflated orders, government policies, fear of price increases and shortage gaming influence fluctuation in the price of agricultural products. The study concludes that bullwhip effect amplifies the phenomenon of price fluctuation along the supply chain of agricultural products due to increased or decreased demand expectations among traders and farmers. We recommend on centralisation of demand information and the adoption of supply chain computer-based systems through coordination, collaboration and strategic partnerships among traders and farmers. This will enhance better information sharing, thus minimising the domino effect of bullwhip.

Keywords: Bullwhip effect, agricultural products, agricultural SC, price fluctuation, trends.

Introduction

Price fluctuation is a global and multifaced phenomenon which affects almost all sectors of the economy in many countries. However, empirical evidence reveals that the agriculture sector experiences and reports higher rates of fluctuation in the price of agricultural products than any other sector (National Bureau of Statistics, 2021, FAO, 2022). A global price index shows that the price for agricultural products fluctuates to an average of 9% to 68.5% in a year, compared to 7.7% to 31.6% in none agricultural products (European Commission, 2022; FAO, 2022). In the agricultural sector, this phenomenon can be traced back to the early 20th century which was highly attributed by the impact of the Second World War. To date, the trends of price fluctuation in agricultural products have gained much momentum with different perspectives in the root causes. Its ultimate impacts to the public and the economy have also been given due weight by scholars and policymakers. Substantial increases in the price of agricultural products lead to inflation, thus affecting purchasing power and economic stability (Wang et al., 2022; Xie and Wang, 2017). Moreover, an increase in price creates eagerness among farmers to cultivate and produce more for the subsequent year, leading to a high supply of agricultural products. High supply on the other hand results in ultimate decreases in the price. Moreover, a decrease in price makes farmers lose interest in production resulting in a shortage of food in the market, causing more fluctuation in the price of agricultural products.

Along the supply chain of agricultural products, the trends and the root causes of price fluctuation have been viewed and reported from different perspectives. The global market report indicates that fluctuation in the price of agricultural products is caused by changes in demand, supply and climatic conditions (FAO, 2022). Studies by Zhang et al. (2019) in China, Huka et al. (2014) in Tanzania and Steven (2018) in Uganda showed that government intervention, agricultural policies and changes in climatic conditions contribute significantly to the fluctuation in the price of agricultural products. Nevertheless, the nature of the season, geographical locations, depleted soil and low responses to overcharging customers' requirements are contributing factors to fluctuation in the price of agricultural products (Misaki et al., 2018; Xie and Wang, 2017). The other major issue that signifies the phenomenon of price fluctuation of agricultural products from the supply chain management perspective is the problem of the bullwhip effect (Pena et al., 2021; Rahman et al., 2020; Yuan et al., 2022), which is described as the variations in demand downstream of supply chain caused by the distortion of information

among supply chain actors.

Adnan and Ozelkan (2019), Pena et al. (2021) and Rahman et al. (2020) connected the causes of the bullwhip effect along the supply chain to the lack of centralised and coordinated market information, the desire to achieve economies of scale in purchasing through batch ordering system, fear of future shortages and price increases, errors in demand and supply forecasting and long lead time in the delivery of requirements. Overreaction to demand (extra or fewer purchases) both have domino effects on the level of price. However, no empirical literature specifically in Tanzania's context that examines the influences of the bullwhip effect on the trend and fluctuation in the price of agricultural products. Previous studies have focused on the socio-economic and climatic factors (Huka et al., 2014; Mchopa et al., 2020) and agricultural supply chain challenges (Misaki et al., 2018; Changalima and Ismail, 2022). It is from this ground; that this study aims to examine the influences of the bullwhip effect on the trend and causes of fluctuation in the price of agricultural products. The study is governed by two specific questions. (1) What is the trend of the price for agricultural products for the last 12 months: October 2021-September 2022? (2) Does the bullwhip effect account for fluctuation in the price of agricultural products?

Literature Review

Theoretical Perspective

The concept of bullwhip effect stems from the theoretical perspective of information asymmetry. The theory was developed by Akerlof in the 1970s when advocating the root causes for market and business failure. Market failure means inefficient distribution of goods and services which is coupled with price instability (Adnan et al., 2019; Wang., 2022). Information asymmetry theory asserts that imbalance of information between the buyers and sellers is the root cause of market and business failure (Akerlof, 1970). It assumes that one party possess more or better information which is not communicated and shared correctly with the other side, causing information imbalance which in turn affects distribution, demand and the price of the goods or services. Information is a power and key competency for market success among traders since it serves as a tool for competitive advantages.

The theory further holds that business actors can perform better and sustain themselves when they develop a sense of balanced information sharing among themselves. In this study, the

information asymmetry theory was employed to explore how the phenomenon of the bullwhip effect contributes to the market failure (price fluctuation) of agricultural products. As defined in this study, bullwhip effect refers to the distortion of demand and market information along the supply chain. Keeping into account that market and demand information is a prime driver of the level of price, therefore distortion of the demand and market information has an ultimate impact on the level of price (Rahman et al., 2020; Yuan et al., 2022). From the theoretical perspective of information asymmetry, that this study assesses how the bullwhip effect (the distortion of demand information) creates information imbalances among the supply chain actors and its ultimate impact on fluctuation and instability in the price of agricultural products.

The bullwhip effect and supply chain of agricultural products

The bullwhip effect is the supply chain phenomenon which describes how small fluctuations in demand at the retail level can cause progressively larger fluctuations in demand at the wholesaler, distributor, manufacturer and raw material supplier. This phenomenon is described as the distortion of demand information downstream of the supply chain (Udenio et al., 2017; Adnan et al., 2019). It occurs at a point when retailers overreact to the demand by ordering too little or too many requirements due to one or more reasons of supply chain practices, causing domino effects along the supply chain. The order tends to increase at each node of the supply chain as we go up in the supply chain. Figure 1 presents a sample fluctuation in demand along the supply chain (actual versus distorted demand) caused by the bullwhip effect.

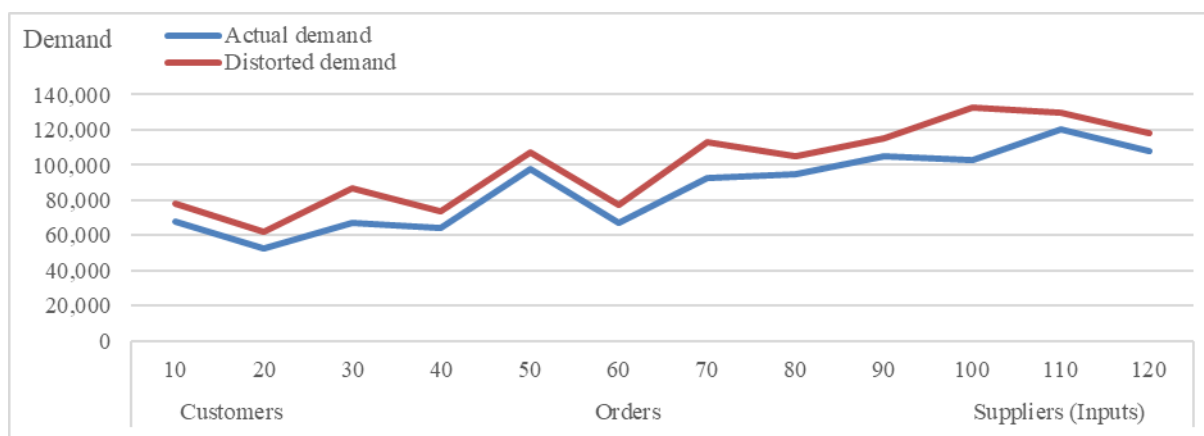


Figure 1: Fluctuation in demand caused by the bullwhip effect

With the bullwhip effect, small changes in the actual demand at a retail level amplify the expectations of wholesalers, distributors and producers, thus resulting in extra or fewer purchases

(distorted demand). Supply chain on the other hand is a set of activities linked upstream and downstream that facilitate the flow of goods, funds and information from the supplier of inputs or raw materials to the ultimate customer (Zhang et al., 2021; Pena et al., 2021). In this study, supply chain refers to the network and interconnected activities and parties involved to facilitate the efficient flow of agricultural products from the farmers to the customers. The agricultural supply chain is linked by a network of inputs suppliers, farmers, distributors, retailers and the ultimate customers. One of the critical issues that impede efficient operation of supply chains is the phenomenon of bullwhip effect (Khan et al., 2019; Nienhaus et al., 2006).

Literature connects the root causes of bullwhip effect from two perspectives, that is the operational causes and behavioural causes (Dahlin, 2021, Ozelkan, et al., 2018). The operational causes of bullwhip effect include the supply chain practices which stem from institutional and physical structure of supply chain. It is influenced by how the supply chain is structured, how it works and coordinates its activities among its actors. It includes supply chain practices such as coordination, demand and supply forecasting updates, availability and sharing of information among supply chain actors, transportation, delivery lead time and inventory management and replenishment (Udenio et al., 2017; Yuan et al., 2022; Dahlin, 2021). Inefficient organisation, coordination and structure of supply chain activities amplify the problems of bullwhip effect. The behavioural causes of bullwhip effect are rooted in how supply chain managers and other supply chain actors make and base their decisions pertaining to supply chain operations. It encompasses the attributes, routines and attitudes of supply chain actors they use in analysing information for decision-making and planning. Behavioural causes of bullwhip effect are sub-optimal supply chain practices enriched through decision-making, which in turn result in adverse impact on supply chain performance. It includes responses and reactions to demand and supply, fear of future shortage, neglecting the impact of delays and lead time, free return policies and batch ordering system (Dahlin, 2021; Rahman et al., 2020). From the literature, we summarised operational and behavioural root causes of bullwhip effect along the supply chain that might have significant influences on fluctuation in the price of agricultural products (see table 1).

Table 1: The root causes bullwhip effect in agricultural supply chain

Issues	Meaning	Supporting references

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	Increases or decreases in the price level of	
Price fluctuation	agricultural products influenced by holding or hoarding of products with anticipation of future price increases	Pena et al. (2021), Steven (2018)
Free return policies	The practices where customers intentionally overstate the demand due to shortages and then cancel the order when the supply becomes adequate.	Rahman et al. (2020), Nienhaus et al. (2006)
Batch ordering	The practice in which buyers accumulate their orders and buy in large quantities from the retailer, distributors and producers to minimise transactional costs	Coppini et al. (2010)
Poor communication	Information asymmetry and lack of transparency in information sharing among the supply chain actors	Ozelkan, et al. (2018)
Inflated orders	The practice in which customers, retailers or distributors currently buy in large quantities with fear of future shortages in supply of products	Adnan et al. (2019), Rahman et al. (2020)
Government policies	Government interventions, policies and by-laws that were enacted to monitor the transportation, distribution and marketing of agricultural products	Nienhaus et al. (2006), Udenio et al. (2017)
Inaccurate forecasts	Errors in estimating the future demand, supply and price of related agricultural supply chain products	Ozelkan, et al. (2018), Yuan et al. (2022)
Impact of economies of scale	Transactional motives and aspire among the supply chain actors who buy in large quantities to achieve quantity discounts and minimise transport cost	Khan et al. (2019), Boute et al. (2008)
Shortage gaming	The practice in which supply chain actors over-purchase or under-purchase the requirements due	Pena et al. (2021), Udenio et al.

	to anticipation of future shortage or plentifully supply	(2017)
Lead time	The time interval in purchasing estimated from a point an order is placed to the delivery point	Udenio et al. (2017)

Causes of fluctuation in the price of agricultural products

The root causes of fluctuation in the price of agricultural products have been viewed and reported from different perspectives. Its ultimate socio-economic impact overly affects producers, distributors, retailers and consumers (Huka et al., 2014; Steven, 2018). Such fluctuation in the price of agricultural products adds uncertainties to farmers' income as well as production decisions (Tong, 2012; Huka et al., 2014). Empirical literature reveals that fluctuation in the price of agricultural products is caused by several factors. The causes stem from technological-related issues, climatic, economic and operational related factors. Studies by Huka et al. (2014) and Xie and Wang (2017) revealed that the use of poor and outdated technology in farming results in price increases while advanced technology does the opposite. Advanced technology fosters production thus increasing the supply of agricultural products at a low price compared to when poor and outdated technology is applied. From a climatic condition perspective, literature shows that the seasonality nature of agricultural products leads to price fluctuation. With seasonal products, producers tend to increase the price during the shortage but when the product is plenty enough the price tends to decrease (Wang et al., 2022). Changes in climatic conditions such as drought and floods adversely affect agricultural production which results in shortages and price increases (Tong, 2012; Huka et al., 2014). On the other hand, good climatic condition with adequate rainfall favours agricultural production and plentiful supply of agricultural products, thus price decreases.

Furthermore, changes in exchange rates lead to price fluctuations since some prices of products increase like fuel gears up transportation costs which evenly affects the price of the product when moved from the farm to the markets (Steven, 2018; Zhang et al., 2019). Moreover, the number of firms involved in production of a certain product influences price fluctuation. Having a large number of firms creates intense competition among producers which eventually leads to price decreases while fewer firms may produce less which results in higher prices (Wang et al., 2022; Misaki et al., 2018). Changalima and Ismail (2022), FAO (2022) and Zhanget al. (2019)

connected the prevailing level of price for agricultural products at a particular market with the distance from the farm to a market, efficiency of transport facilities and infrastructure. Their findings assert that long-distance and ineffective transport facilities and infrastructure attract high prices while short-distance and effective transport facilities and infrastructure account for low prices.

A compressive assessment of the influences of the bullwhip effect on fluctuation in the price of agricultural products has not developed yet. Discussions from the previous studies are centred on the socio-economic and climatic factors that influence fluctuation in the price of agricultural products (Huka et al., 2014; Mchopa et al., 2020), agricultural supply chain challenges and the socio-economic impact of price fluctuation (Changalima and Ismail, 2022; Misaki et al., 2018; Xie and Wang, 2017) and the causes of bullwhip effect along the supply chains (Pena et al., 2021; Rahman et al., 2020; Dahlin and Oscar, 2021). Discussion on the influences of bullwhip effect on fluctuation in the price of agricultural products has been neglected, especially in Tanzania's context. As discussed, there are numerous causes of bullwhip effect that are believed to have significant influence on the price of agricultural products. However, it is not possible to ascertain the influence of each cause available in the literature. In this regard, this study enhances the general knowledge of scholars, supply chain managers and practitioners on the influences of bullwhip effect on fluctuation in the price of agricultural products.

Methods

There are pieces of literature which examine the causes of fluctuation in the price of agricultural products by using different designs and approaches in different perspectives and scopes. This study employed a cross-sectional research design to assess and establish the influence of the bullwhip effect on fluctuation in the price of agricultural products. The study aimed at assessing and describing the phenomenon of the bullwhip effect and fluctuation in the price of agricultural products at a single point in time (one year), from October 2021 to September 2022, thus tied well with the focus of the study's design (Flick, 2020). The target population for this study were 386 agricultural supply chain actors, comprising customers, retailers, distributors and farmers who were proportionally divided into four strata of 96 respondents. It is believed that these actors are the sources of the bullwhip effect in any supply chain (Rahman et al., 2020; Yuan et al., 2022). Israel's formula for infinite population (1992), $n = \frac{Z^2 pq}{e^2}$ was used to determine the specified sample size with 0.05 tolerance error. Stratified random sampling was used to select the

unit of analysis from each stratum. Only agricultural supply chain actors with an average of more than one year in dealing with agricultural products were sampled for analysis. This helped the researchers to collect and analyse valid data from respondents with a wider understanding and experience on the variables under investigation.

The study was conducted at Mbalizi market in Mbeya region. Mbalizi market is the leading and central market for agricultural products in the Southern Highland of Tanzania which brings together and integrates farmers, distributors, retailers and customers from the neighbouring regions and the country at large. Moreover, Mbeya region is one of the leading regions that produce and distribute to other regions almost all types of products. Nevertheless, Mbeya region is one of the regions that have been regularly sampled by the ministry of investment, industry and trade (MIIT) to establish weekly and monthly trends in the price of agricultural products in Tanzania. It is from the aforementioned criteria, Mbalizi markets in Mbeya region were selected for observations of the variables under the study. We only selected seven (7) agricultural products: maize, rice, beans, sorghum, bulrush millet, finger millet and round potatoes whose data on the trend of price have been regularly monitored and published by the MIIT. The study collected both primary and secondary quantitative data. Secondary quantitative data related to the trends of agricultural products were collected through documentary review. Mainly, a weekly and monthly market bulletin on the trends of the price of agricultural products for the previous 12 months (October 2021-September 2022) were retrieved from the MIIT and reviewed.

Primary quantitative data were collected from customers, retailers, distributors and farmers using a questionnaire survey to assess the implications of information asymmetry theory on fluctuation in the price of agricultural products. Information asymmetry theory assumes for market and business failure due to imbalance of information between the buyers and sellers. Therefore, information asymmetry theory was used to ascertain whether bullwhip effect influences fluctuation in the price of agricultural products using a set of multiple responses questionnaire. Data pertaining to the causes of the bullwhip effect (practices) along the supply chain of agricultural products such as batch ordering system, reaction to future demand and price, inflation of orders, government intervention, lead time and demand information asymmetry were sought from the target respondents. A set of self-administered questionnaires containing multiple response questions were issued to 384 respondents through the drop-and-pick later method. However, only 77.1% (n=296; 71 customers, 76 retailers, 68 wholesalers and 81 farmers) of

questionnaires were successfully filled and returned. The influence of the bullwhip effect on fluctuation in the price of agricultural products was ascertained by using descriptive statistics (frequencies and percentages) which were generated through multiple responses.

Results and discussion

Trends in fluctuation of the price of agricultural products

The trends of price fluctuation for the selected agricultural products in the 12 last months are depicted in table 2 and figure 2. The price of beans was significantly higher compared to the price of other products followed by the price of rice and finger millet. The minimum price for 100kgs of maize was Tsh. 47,800/= in October 2021 and turned out to Tsh. 120,000/= as the maximum price in August 2022. In October 2021, the price for 100kgs of beans was Tsh. 202,500/= as the minimum price and turned out to Tsh. 260,000/= in December 2021 before falling back to Tsh. 213,300/= in February 2022. The maximum price for 100kg of beans was Tsh. 267,500/=. The minimum price for 100kgs of rice was 152,500/= in November 2021, and kept fluctuating to up to a maximum of Tsh. 235,000/= in September 2022. Round potatoes revealed the lowest level of price than other products followed by maize and bulrush millet. The price for 100kgs of round potatoes stood at Tsh. 56,500/= as the minimum price in October 2021 and Tsh. 101,000/= in September 2022 as the maximum price.

Figure 2: Fluctuation in the price of selected agricultural products: October 2021-September 2022

Types of agricultural products	Level of price (Tsh/100kgs)		
	Minimum	Maximum	Average
Maize	47,800	120,000	84,075
Rice	152,500	235,000	198,475
Beans	202,500	267,500	227,775
Sorghum	65,000	145,000	104,792
Bulrush millet	70,000	115,000	93,025
Finger millet	157,500	185,000	168,683
Round potatoes	56,500	101,000	74,533

The analysis further revealed rapid fluctuations in the price of sorghum from the minimum price

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of Tsh. 65,000/= in January 2022, Tsh. 90,000/= in October 2021, Tsh. 75,000/= in December 2021 to a maximum of Tsh. 145,000/= in May 2022. The price for 100kgs of finger millet fluctuated from Tsh. 170,000/= in October 2021 to a minimum price of Tsh. 157,500/= in November 2021 before rising up to Tsh. 185,000/= in April 2022. For bulrush millet, the minimum price of 100kgs was Tsh. 70,000/= while the maximum price was Tsh. 115,000/=. Generally, it is revealed that the price of the selected seven (7) agricultural products have been fluctuating (decreasing or increasing) for the last 12 months (see figure 1). This is an indication that the price of agricultural products never stabilises, it keeps fluctuating on a daily, weekly or monthly basis due to one or more seasons. In their studies, Huka et al., (2014), Steven (2018) and Xie and Wang (2017) spotted the changes in climatic conditions, poor infrastructure, low production, poor storage facilities, government regulations and seasonal production as the prime contributing factors to fluctuation in the price of agricultural products.

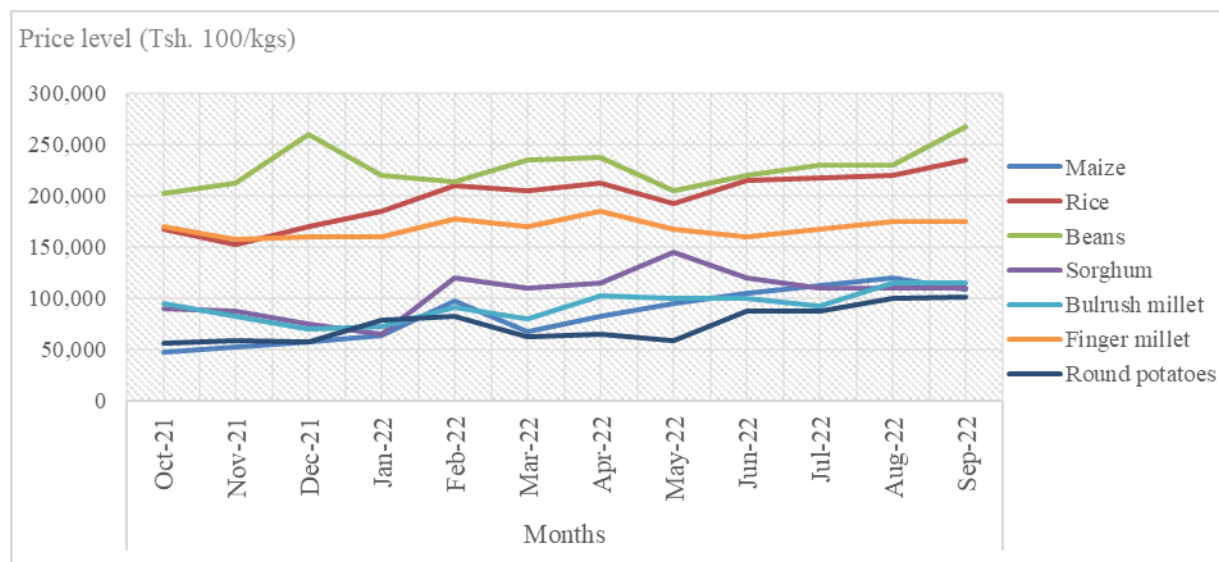


Figure 2: Trends in fluctuation of the price of agricultural products

Source: Extracted from the National Bureau of Statistics (2022)

Influences of bullwhip effect on agricultural price fluctuation

This part presents and discusses the results regarding the influences of bullwhip effect on fluctuation in the price of agricultural products as one of the contemporary issues in supply chain management. The results of the influences of the bullwhip effect on price fluctuation are summarised in table 3. Holding and hoarding agricultural products with anticipation of future

price increases was mentioned by 88.17% (n=261) of the respondents which influences fluctuation in the price of agricultural products. Specifically, farmers and distributors tend to hold agricultural products with anticipation of selling them in the future when the price is relatively high. This practice creates deficit and scarcity in the market, thus causing price increases (Rahman et al., 2020; Wang et al., 2022). Contrary to their anticipation at the point of selling, price decreases due to plentiful supply of agricultural products (Ozelkan et al., 2018; Steven, 2018). Accumulation of order under batch ordering system was mentioned by 87.16% (n=258) of respondents and ranked 2nd among the practices of the bullwhip that influence fluctuation in the price of agricultural products. Customers and retailers mostly prefer accumulating their requirements and buying in large quantities with an intention and aspiring to achieve economies of scale in transport costs. This practice alerts wholesalers and farmers as the indicator of increased demand, thus increasing the price of agricultural products (Steven, 2018; Pena et al., 2021). However, in a short-run or long-run distributors and farmers experience limited demand, resulting in price decreases (Israel et al., 2022; Adnan and Ozelkan, 2019).

Order processing time (lead time) was also mentioned by 86.15% (n=255) of respondents as one of the practices pertained to bullwhip effect that plays a significant role in altering the price of agricultural products. The longer the order processing time, the more it creates scarcity particularly at the retailers causing price increases (Yuan et al., 2022; Ozelkan et al., 2018). Moreover, a long lead time results in more quantities ordered and safety stock while a short lead time results in the opposite, thus more fluctuations in price (Adnan and Ozelkan, 2019). It was established by 78.38% (n=232) of respondents that inflated orders due to fear of future shortage in supply of agricultural products causes price fluctuation. This implies that over-reaction and under-reaction to supply and demand expectations by ordering too many or too few products contribute to price fluctuation which was ranked 9th in this study and spotted by 59.12% (n=175) of respondents. The findings are in line with Adnan and Ozelkan's (2019) and Steven's (2018) findings that over-reacting to demand due to fear of future shortage results in over-purchasing which leads to scarcity and ultimate increases in price. On the other hand, when the shortage seasons never came, customers and retailers go back to their normal orders, causing more fluctuations in price. About 75.68% (n=224) of respondents further mentioned that transactional motive with aspires to achieve quantity discount among the traders is also a causative agent to fluctuation in the price of agricultural products. Quantity discounts enable traders to buy and

hold agricultural products in large quantities, the practice which results in limited demand in the future thus causing more variability in price (Xie et al., 2017; Wang et al., 2022).

Table 3: Multiple response results: bullwhip effect and price fluctuation

Root causes of the bullwhip effect	Count	Per cents (%)	Ranking
Holding of products with anticipation of future price increases	261	88.17	1
Accumulation of order under batch ordering system	258	87.16	2
Purchasing lead time in the delivery of agricultural products	255	86.15	3
Inflated orders due to fear of future shortages in supply of products	232	78.38	4
Transactional motives and aspiration to achieve quantity discount	224	75.68	5
Government interventions, policies and by-laws	218	73.64	6
Wrong demand and supply forecasts	209	70.61	7
Demand and supply information asymmetry among actors	197	66.55	8
Over-purchasing and under-purchasing of requirements	175	59.12	9
Intentionally overstating and cancelling the demand	147	49.66	10

Government interventions, policies and by-laws also result in price fluctuation of agricultural products (73.64%, n=218). Government policies and interventions particularly on the import and export of agricultural products are of immense impact on agriculture's price fluctuation. Regulations that restrict the export of agricultural products result in plenty of supply and decreased demand for agricultural products within a country causing decreases in price (Adnan and Ozelkan, 2019). On the other hand, policies toward export enable farmers to exploit the global market, resulting in increased demand and the price of agricultural products (Pena et al., 2021). Furthermore, 70.61% (n=209) of respondents argued that wrong forecasts in demand and supply of agricultural products are one of the bullwhip effect-related issues that influence price

fluctuation. A better forecast is needed to balance the production, demand and price of agricultural products at each node of the agricultural supply chain. Like Adnan and Ozelkan's (2019) and Pena et al's (2021) findings, this study asserts that poor forecasting results in a mismatch between the demand and supply of agricultural products, causing variability in the price. Demand and supply information asymmetry among agricultural supply chain actors was mentioned and spotted by 66.55% (n=197) of respondents. This implies that market demand and supply information is not correctly shared along the agricultural supply chain actors. This makes it difficult in setting and stabilising the price of agricultural products. This finding concurs with Xie et al's (2017) and Wang et al's (2017) and Rahman et al's (2020) findings that wrong demand and forecasting tend to create more variability in the price at different nodes of the agricultural supply chain.

Contributions, limitations and theoretical implications

Despite several pieces of literature which address the factors that influence fluctuation in the price of agricultural products, none of them examines the influences of the bullwhip effect. Previous studies focus on the causes from socio-economic, climatic conditions and supply chain challenges perspectives. Using asymmetry information theory, this study enriches the literature by assessing the influences of the bullwhip effect on fluctuation in the price of agricultural products. However, the findings are limited to trends and fluctuations in the price of selected agricultural products in Tanzania's context. Trends in the price of agricultural products other than the selected ones were not accounted for. Moreover, the assessment is limited to a single production season (October 2021 – September 2022). Therefore, the findings of this study should not be generalised to other products and seasons other than the specified. Information asymmetry theory prescribes the consequences of imbalance of information among the supply chain actors as the root cause of market and business failure. The findings presented and discussed in this study ascertain how information asymmetry among the supply chain actors causes market failure (price fluctuation) for agricultural products. Apart from climatic condition and socio-economic factors, it was revealed that fluctuation in the price of agricultural products is also influenced by information asymmetry (the bullwhip effect) among the supply chain actors. Issues like shortage gaming, fear of future shortage and price increases, inaccurate forecasting, delayed lead time, inflated orders and batch ordering system are the root causes for bullwhip effect or otherwise information asymmetry which in turn affect the price of agricultural products.

Conclusion and managerial implications

The study identified and ranked the prime causes of the bullwhip effect and their influences on fluctuation in the price of agricultural products by a means of frequencies and percentages. The findings of the study are that batch ordering system, shortage gaming practices, inflating orders, agricultural demand and supply information asymmetry, order processing lead time, wrong demand and supply forecasts, over and under-reaction to demand, transactional and precautionary motives and government interventions are the root causes of the bullwhip effect which play an imperative role in price fluctuation for agricultural products. The bullwhip effect results in distortion of demand and supply information, which in turn result in price fluctuation. To minimise the problem of the bullwhip effect and price fluctuation, the authors recommend toward centralised demand and supply information-sharing system through coordination, collaboration and strategic partnerships among the agricultural supply chain actors. Moreover, supply chain managers and practitioners should adopt computer-based systems that integrate and connect supply chain actors such as vendor-managed inventory (VMI), enterprise resources planning (ERP) and electronic data interchange (EDI). This will enhance better information sharing systems for agricultural products (demand, supply and price) among agricultural supply chain actors. Since the price of agricultural products fluctuates over time, we suggest that longitudinal case study be conducted. The study should adopt climatic and socio-economic factors as the explanatory variable with a mediating role of bullwhip effect. This will enrich literature on the causes of fluctuation in the price of agricultural products from climatic, socio-economic and supply chain perspectives.

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Determinants Of E-Procurement Adoption by Institutions in Kenya and Tanzania During Covid-19 Era

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Abstract

Electronic procurement (E-procurement) is one of the rapidly expanding digital form of procurement in both public and private institutions in Kenya and Tanzania. E-procurement is used by most public and private institutions to strengthen buyer-supplier relationships, cut transaction costs, eliminate maverick purchases, increase organizational coordination, and supply chain performance. It is perceived that most of the business operations were automated during the COVID-19 era to minimize the spread of novel corona virus. Therefore, this study intended to do a thorough empirical literature review on the determinants of E-procurement adoption in Kenyan and Tanzanian institutions during the COVID-19 era.

Keywords: E-procurement, Adoption, COVID-19 era

Introduction

In December 2019, the world experienced a global health crisis caused by coronavirus disease (COVID -19) which was first observed in Wuhan, China (Humphries *et al.*, 2020). The outbreak of COVID-19 caused significant chaos to business activities and organization operations. The efforts to avoid spread of COVID -19 among people led to a lockdown of communities and closure of businesses (Akpan *et al.*, 2020). It is worth noting that the application of technology was inevitable during the COVID-19 era as most of the business activities were negatively impacted and communities were put on lockdown, and businesses were forced to close in the quest of dealing with the spread of the novel corona virus (Humphries *et al.*, 2020; Akpan 2020; Wang & Tang 2020). In order to avoid a complete shutdown of economic activities most of the

business transactions were automated during COVID-19 era including procurement-oriented activities.

Information and communication technology (ICT) is inevitably used in both public and private institutions in the modern, globalized world. The procurement process has been automated as a result of numerous reforms and application of ICT in business operations. E-procurement is the term used when purchases are made with the aid of ICT. E-procurement is the process of carrying out procurement tasks such as identification of needs, supplier selection, contract management, and payment processing using electronic methods over the internet. Through the use of E-procurement platforms, numerous nations all over the world has earned competitive edge in their business operations (Gitonga , 2021; Syed Rahman *et al.*, 2019) .

Developed countries such as Japan, United Kingdom (UK) Australia, United States of America (USA) and Singapore have effectively deployed E-procurement systems and are now reaping the benefits. The benefits of E-procurement include saving time, less paper work, minimize cost, quick ordering and reduction of maverick spending. However, E-procurement systems are not fully utilized in many of the developing countries since they are seen as intimidating to adopt (Mohungoo, Brown, & Kabanda 2020; Syed Rahman *et al.*, 2019) .

In order to reduce corruption and have a substantial economic impact, Sub-Saharan African nations, have indicated interest in adopting E-procurement. Moreover, these confront a number of E-procurement implementation obstacles that, if not resolved, may delay the process and discourage committed leaders from E-procurement implementation in various institutions (Mohungoo *et al.*, 2020).

Tanzania as a country is not left behind in utilizing innovations and ICT in the quest to adopt E-procurement. Tanzanian government has decided to fully automate public operations through deploying various systems such as Planning and Reporting System (PLANREP), government payment system (MUSE), Government e-Payment Gateway (GePG) and, Tanzania National e-Procurement System (TANePS.) (URT, 2016).

A pilot study of chosen vendors and experts from various public organizations across Tanzania was conducted in support of the adoption of E-procurement. The pilot program aimed to change participants' perceptions on the benefits and performance of TANePS. Surprisingly, just 63.4% of the participants were unable to implement the system, and 60% did not fully understand how

it operated. The primary issues with this phenomenon have not been addressed by the available empirical studies (Shatta, Shayo, *et al.*, 2020; Shatta, 2020; Shilla 2019; URT 2019).

In Kenyan context, public procurement has proven to be a time consuming and challenging process. The public procurement system has shown to be expensive for procuring entities and suppliers, a hub for corruption, and rife with problems that result in substantial losses of public funds. The government has adopted E-procurement to sustain the essential principles of Kenyan good governance, including transparency, accountability, and integrity (Maalim & Paul , 2019). Moreover, Kenyan Vision 2030 also acknowledges Small and Medium Enterprises (SME's) as key players in developing a revolutionary industrializing and high middle-income nation. In essence, SME's can lower Kenya's high unemployment rate and raise the Gross Domestic Product (GDP) of the country. Unfortunately, the failure rate of SME's is high across the globe, including Kenya. This could be caused by a variety of obstacles, such as a lack of adoption of E-procurement technology and an entrepreneurial culture (Gitonga , 2021).

Statement of the Problem

The era for any country to avoid technological changes being seen around the world have passed. The discovery of novel corona virus only served as a warning to create digital platforms in all institutional undertakings (Wang & Tang 2020). It is perceived that most of business operations were automated during COVID-19 pandemic ((Humphries *et al.*, 2020; Akpan 2020). One of the technologies that makes it possible to complete procurement duties electronically and streamline the entire procurement process is E-procurement.

Despite the automation of most of business transactions during COVID-19 era, 63.4% of the participants of the program aimed to change the perception on the benefits and performance of E-procurement systems in Tanzania failed to implement the system while in Kenya failure rate of SME is high and could be caused by lack of adoption of E-procurement technology (Shatta, Shayo, *et al.*, 2020; Shatta, 2020; Shilla 2019; URT 2019 ; Gitonga , 2021). Since it is perceived that COVID 19 era was characterized by automation of most of business transactions, it is still important to understand determinants led to the adoption of E-procurement in Kenyan and Tanzanian institutions during COVID 19-time frame. By understanding these determinants, the researcher hopes to hasten the adoption of E-procurement by Kenyan and Tanzanian institutions that are currently lagging behind.

Rationale Of the Study

The motivation behind this study lies in the fact that during the COVID-19 era the world was forced to be automated and the businesses that survived past the era were the ones that embraced the digital setup. Governments of Kenya and Tanzania are no exceptional. Thus, finding the determinants of E-procurement in both of these countries becomes vital. Additionally, getting to know the determinants that mostly affected E-procurement adoption during that time frame will provide a room for those institutions that lagged behind to rise up to the occasion as far as E-procurement adoption is concerned.

Theoretically, the study tested positively to two theories namely Unified Theory of Acceptance and use of Technology (UTAUT) and Technological -Organizational -Environmental (TOE) model/framework.

To the academicians/researchers this study will serve as a source of empirical literature to those interested in this line of research. Likewise, to the governments of Kenya and Tanzania this research work will serve as a catalyst that will accelerate the process of automation of procurement activities. To policy makers this study will be a great platform through which various policies can be enacted to support full digitalization of the procurement undertakings.

Literature Review

A number of theories, such as Resource-Based View (RBV), Innovation Diffusion Theory (IDT), Technology Acceptance Model (TAM), Technology Adoption Theory (TAT) Institutional Theory (IT), Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Stakeholders' Theory (ST), Unified Theory of Acceptance and Use of Technology (UTAUT), Information Systems Success Theory (ISST), Disruptive Innovation Theory (DIT) , Theory of Human Service Delivery (THSD), and Technological-Organizational-Environmental (TOE) model have been used to various empirical studies related to E-procurement adoption (Mushi & Nsimbila , 2022; Alphonse , 2020; Lyimo & Abdul , 2019). However, most research have relied on RBV, IDT, and TAM (Owere , 2021; Gitonga , 2021; Alphonse, 2020; Maalim & Paul , 2019 ; Ngunjiri , 2019).

Due to potential inconsistencies in one theory or model, it is advised that for clarity and consistence to be achieved researchers ought to use at least two theories in a study to gain a broader knowledge of technology adoption in an institution (Kiwauka, 2015). The adoption of E-procurement is said to be impacted by organizational, environmental, technological, and personal variables. Since the Technological-Organizational-Environmental (TOE) model explains technology adoption in the context of technology, organizations, and environments, while the Unified Theory of Acceptance and use of Technology (UTAUT) supplements by adding the individual context, this study adopted both models as they were applied by (Shatta & Shayo, 2021).

TOE described the adoption and implementation of technology by a company is influenced by technological, organizational and environmental context. Technological context includes technological tools, processes, external and internal technologies that are pertinent to the firm. Organizational context refers to the features and assets of an organization, such as managerial structure, human resources, level of slack resources, size, connections between employees, level of formalization and centralization. Size and structure of the industry, organizational competitors, macroeconomic climate, the firm's competitors, and the regulatory environment are part of the environmental context (Tornatzky & Fleischer, 1990)

Furthermore, UTAUT attempts to illuminate user motives to use technology and subsequent usage patterns. Four essential constructs—effort expectancy, social influence, performance expectancy, and facilitating conditions—have an impact on likelihood of adoption of new technology by people. The first three are factors that affect user behavior and usage intention, while the fourth factor affect user behavior. Gender, age, experience, and voluntariness all act as moderators to the impact of the four dimensions on usage intention and user behavior (Venkatesh *et al.*, 2003).

Determinants for the adoption of E-procurement in different institutions have been the subject of numerous researches undertaken worldwide. For instance, Rouibah, Dihani, & Al-Qirim (2020), found that top management support, supplier readiness, employee knowledge and skills,

compatibility, relative advantage, and complexity were the factors that strongly influenced the adoption of E-procurement in Sri Lankan public sector organizations. Similar to this, Ofori & Fuseini (2020), conducted research on critical success factors for Ghana's adoption of electronic government procurement. The most important success element for the adoption of E-procurement was identified by the results as being quick, reliable and inexpensive internet services. In addition, the study found that organizational support for human factors, infrastructure setup, system features, management and control influence the adoption of E-procurement.

Utilizing Technology Acceptance Theory (TAT), Mushi & Nsimbila (2022) carried research on determinants of electronic procurement system adoption in Tanzania. They discovered that employee skill, education, organizational structure, and collaboration promote adoption of E-procurement in public institutions whereas employee age, education, motivation, and teamwork have the opposite effect in private institutions. In order to explore the factors that influence the adoption of an E-procurement model for green procurement in Tanzania, Shatta, Shayo, & Layaa (2020) used the Unified Theory of Acceptance and Use of Technology (UTAUT) and Technological-Organizational-Environmental (TOE) models. Results showed that while attitude has a direct impact on E-procurement adoption, legal framework, relative advantage, and performance expectancy have an indirect effect. Additionally, Siwandeti, Sanga, & Panga (2021) applied Resource-Based View Theory (RBV) and the Technology Acceptance Model (TAM) to conduct a study on technological factors impacting vendors' involvement in the public electronic procurement system in Ilala, Tanzania. Data security, system integration, data quality and management, information transparency, originality, and innovation were discovered to be technological elements that had an impact on the adoption of e-procurement by vendors.

On other hand, Gitonga (2021) conducted research on influence of technological factors on E-procurement adoption in small and medium size enterprises (SMEs) Kenya's Nyeri county. Findings were supported by the Resource-Based View (RBV) theory showed that, SMEs' adoption of E-procurement is impacted by technological factors such as the lack of E-procurement software, a lack of technical know-how, a lack of IT infrastructure, and concerns about information security and confidentiality. Similarly, Owere (2021) did a study on

organizational attributes and adoption of E-procurement in Tororo district in Kenya. The study was anchored on technology acceptance model (TAM) and findings indicated that ICT proficiency, employee competence and managerial decision had a positive correlation with the adoption of e-procurement. On top of that, Gitonga *et al.*, (2020) applied a Resource Based View theory to perform a study on influence of internal organizational factors on e-procurement adoption in small and medium sized enterprises in Kenyan Nyeri county. The results concluded that size of the organization, staff retention, manager's perception, trust on technology, and employee knowledge are internal organizational factors influence adoption of e-procurement to SMEs.

The conclusions on the determinants of E-procurement in various institutions are not comparable based on the empirical literatures examined above although the observed results based on technological, organizational, environmental and individual context. This disparity inspired the researcher to use the TOE model and UTAUT theory which takes into account the technological, organizational, environmental context (TOE), and individual context (UTAUT) to undertake study on the determinants of E-procurement adoption in Kenyan and Tanzanian institutions during the covid 19 era.

Method

This paper used a desktop technique of literature review to source empirical literature on the determinants of E-procurement adoption in Kenya and Tanzania during the COVID-19 era (2019 – 2022). The selection of papers was guided by inclusion and exclusion principles and literatures were chosen based on applicability and relevance of the research topic. Quantitative technique was applied whereby frequency analysis was adopted to find the results of the study. Ten papers from each country which makes a total of twenty papers were reviewed in order to identify the determinants of E-procurement adoption with highest frequency during COVID 19 era. Secondary data was used to extract the most frequent mentioned determinants of E-procurement adoption. The researcher used 20 literatures to source study variable since other researchers like Mapunda (2021) drew conclusions from 20 literatures in African perspective while Mohammed *et al.*, (2013) ; Rumanyika & Mashenene, (2014) compiled their findings using 12 literatures.

The researcher chose the aforementioned countries in East Africa because after a thorough literature review across several databases with the restriction of the COVID -19 period (2019–2022), Kenya and Tanzania had more empirical results than other East African countries namely Burundi, Democratic Republic of Congo, Rwanda, South Sudan and Uganda.

Sources of Data

Published and unpublished literatures were used as the source of data by using different electronic data bases and search engine which include Google, Google Scholar, Emerald, Science Direct, Google Books, Wiley Online, Sage Publications, AJAR Taylor and Francis and many others.

Search Keywords

Keywords used for searching the study topic were; (“E-procurement” OR “Internet procurement” OR “Online procurement” OR “Web procurement” OR “Digital procurement”) AND (“Kenya” OR “Tanzania”) AND (“2019” OR “2020” OR “2021” OR “2022”).

Inclusion and Exclusion Principle

Only English-language research papers were included in the search of the literature. The literatures were confined to Kenyan and Tanzanian institutions that had adopted E-procurement. This study includes E-procurement articles from the COVID 19 era, which ran from 2019 to 2022. This is because numerous studies such as (Humphries *et al.*, 2020; Akpan 2020; Wang & Tang 2020) have shown digitalization of institutional processes during the latter era.

Study Variables and Sample Size

Due to the fact that some studies, such Mapunda (2021), used 20 sources of information while Mohammed *et al.*, (2013) ; Rumanyika & Mashenene, (2014) used 12 sources for the compilation of their conclusions, sample of 20 literatures, of which 10 were collected from each country was deemed sufficient for statistical analysis. However, the condition that the study variable must appear more than once from the reviewed research was applied.

Data Analysis

Data from the reviewed literature were analyzed by using descriptive statistics. The determinants that contributed to the adoption of E-procurement were tallied and given frequencies. The percentage was calculated by taking total frequencies of each E-procurement determinant divided by two (the number of countries) and multiplied by 100. The determinants were deemed significant if they had a score of 50% or above (Mapunda, 2021). Clustered column charts were then used to summarize the findings.

Results

Teamwork, individual age, individual education, staff pressure, staff awareness, staff competency, organizational size, attitude, performance expectancy, legal framework, compatibility, complexity, IT infrastructure, perceived benefits, management support, user involvement, security, capital, supplier capability, system integration, internet connection, staff training, and user acceptance were discovered to be determinants of e-procurement adoption of various institutions in Tanzania and Kenya. The determinants of e-procurement adoption in Tanzania and Kenya are listed in Table 1

Table 1: Determinants of e-procurement adoption in Tanzania and Kenya (2019-2022)

S/NO	Author	Country	Determinants/Findings
1	Mushi & Nsimbila (2022)	Tanzania	Individual education, Individual age, staff competency, organizational structure and team work
2	Shatta <i>et al.</i> (2020)	Tanzania	Attitude, performance expectancy, relative advantage, legal framework
3	Dismas & Siwandeti (2019)	Tanzania	Compatibility, complexity, technological infrastructures, perceived benefits, organizational size, management attitude, user involvement, coercive pressure, mimetic pressure, normative pressure, value addition

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4	Emily (2019)	Tanzania	Legal framework, employee competency, technological infrastructure and data security
5	Alphonse (2020)	Tanzania	Stakeholders' awareness, management involvement, financial resource, staff competency
6	Lyimo & Abdul (2019)	Tanzania	Top management commitment, supplier capacity and technological infrastructure
7	Siwandeti, Sanga, & Panga (2021)	Tanzania	Information transparency, creativity and innovation, data quality and management, system integration, data security and IT literacy
8	Kissuda (2021)	Tanzania	Technological infrastructure, reliable internet service, system compatibility, management support, public procurement regulations, staff training, computer literacy, user acceptance, perceived benefits
9	Jackson (2019)	Tanzania	Legal framework, Enterprise Resource Planning, supplier compatibility, internet connectivity, management support, infrastructure, funds, security and staff mind set
10	Issa (2020)	Tanzania	Perceived benefits, technological infrastructure, complexity, compatibility, organizational size, management support, user involvement, staff competency, performance expectancy

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11	Waithaka & Kimani (2021)	Kenya	E-security, staffing, user acceptance, top management support
12	Mariam & Kisimbii (2020)	Kenya	Stakeholders involvement, technology infrastructure, staff skills, top management support
13	Gitonga et al. (2020)	Kenya	Employee knowledge, size of the organization, staff retention, trust on technology, perceptions of managers
14	Gitonga (2021)	Kenya	Security, confidentiality, IT infrastructure, system integrations, proper needs assessment, IT experts, unavailability of e-procurement software
15	Ngunjiri (2019)	Kenya	Capital, IT infrastructure, system compatibility, unstable internet connections, staff training, top management support
16	Ngeta & Kisimbii (2020)	Kenya	IT infrastructure, staff competence, top management support, management involvement
17	Oyamo & Nyakeyo (2019)	Kenya	Staff training, staff involvement, supplier adoption, IT experts, Top management support
18	Mumo (2019)	Kenya	Staff competency, management support, IT infrastructure, security, training, system integration
19	Maalim & Paul	Kenya	IT infrastructure, staff training, top

	(2019)		management support, supplier capability
20	Owere (2021)	Kenya	Top management support, procurement planning, capital, IT infrastructure, internet accessibility, internet reliability and affordability, staff competency, staff willingness

The rule that determinants must appear more than once guided the selection of the 18 determinants of E-procurement adoption. Each determinant was then utilized as a header in a table that had been prepared. The findings from two countries were organized under each heading based on their similarity. As a result, table 2 compiles the determinants of e-procurement adoption based on their similarities.

Table 2: Summary of determinants of e-procurement adoption

Author	S C	O S	A T T	P E	LF	CO MP	COM PL	IT F	P B	M S	U I	S E	C P	SU C	S I	INT S	S T	U A
Mushi & Nsimbila (2022)	x	x																
Shatta <i>et al.</i> , (2020)			X	X	X				X									
Dismas & Siwandeti (2019)		X				X	X	X	X	X	X							
Emily (2019)	X				X			X				X						
Alphonse (2020)	X									X			X					

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Lyimo & Abdul (2019)								X		X				X				
Siwandeti, Sanga, & Panga (2021)	X											X			X			
Kissuda (2021)	X				X	X		X	X	X						X	X	X
Jackson (2019)			X		X	X		X		X		X	X			X		
Issa (2020)	X	X		X		X	X	X	X	X		X						
Waithaka & Kimani (2021)	X									X		X						X
Mariam & Kisimbii (2020)	X							X		X	X							
Gitonga <i>et al.</i> , (2020)	X	X								X		X						
Gitonga (2021)	X							X				X				X	X	X
Ngunjiri (2019)						X		X		X			X					
Ngeta & Kisimbii (2020)	X							X		X	X							

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Oyamo & Nyakeyo (2019)	X									X		X		X			X	
Mumo (2019)	X							X		X		X			X		X	
Maalim & Paul (2019)								X		X				X			X	
Owere (2021)	X		X					X		X			X			X		

Key: (1) SC – Staff competency (2) OS – Organizational Size (3) ATT – Attitude (4)

PE – Performance Expectancy (5) LF – Legal Framework (6) COMP – Compatibility (7) COMPL –Complexity (8) ITF – IT Infrastructure (9) PB – Perceived Benefits (10) MS – Management Support (11) UI – User Involvement (12) SE – Security (13) Capital (14) SUC- Supplier Capability (15) SI – System Integration (16) INTC – Internet Connection (17) ST – Staff Training (18) UA – User Acceptance

Additionally, the frequencies of the E-procurement determinants were constructed based on the results of table 2, and the percentage was determined. Three of the 18 determinants were significant out of the total because they received a score of 50% or above, while the remaining determinants were not. Therefore, throughout the COVID 19 era, management support (75%), staff competency (70%) and IT infrastructure (65%) were the key determinants of E-procurement adoption by institutions in Kenya and Tanzania. Table 3 lists the frequencies and percentages for the determinants of E-procurement adoption.

Table 3: Frequency and percentage of E-procurement adoption

Sn	Determinant	Frequency	Percentage (%)
1	Staff Competence	14	70*
2	Organizational Size	4	20

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3	Attitude	3	15
4	Performance Expectancy	2	10
5	Legal Framework	4	20
6	Compatibility	5	25
7	Complexity	2	10
8	IT Infrastructure	13	65*
9	Perceived Benefits	4	20
10	Management Support	15	75*
11	User Involvement	3	15
12	Security	9	45
13	Capital	4	20
14	Supplier Capability	3	15
15	System Integration	3	15
16	Internet Connection	4	20
17	Staff Training	5	25
18	User Acceptancy	2	10

Discussions

Top Management Support

The use of E-procurement at institutional level is aided by management support provided through the organizational culture, staff training, collective commitment, allocation of resources and responsibilities. Findings are affiliated by both TOE model and UTAUT theory. TOE model

clustered management support under connection between employees which is within organizational factors influencing institutional to adopt technology while UTAUT described that individuals will easily adopt technology if management (facilitating condition) will provide support on the use of the technology through in-house and out-off job trainings. This contention is supported by the research conducted by Alphonse (2020), who discovered a significant correlation between senior management support and E-procurement adoption in Tanzania's public institutions. Similarly, Jackson (2019), found that top management support is one of the biggest obstacles to adoption of E-procurement in Mwanza Urban Water Supply and Sanitation Authority (MWAUWASA) in Tanzania. Additionally, Ngunjiri (2019) and Maalim & Paul (2019) described that top management support had a positive effect on the implementation of e-procurement in Kenya at Murang'a county and northern eastern region county respectively. Moreover, Kissuda (2021) and Mumo (2019) identified that senior management support in Tanzania and Kenya, respectively, is a crucial success factor for the implementation of e-procurement in the ministry of finance.

Staff Competency

The adoption of E-procurement in any institution is easily implemented provided that the staff involved have the right attitude, knowledge, abilities, and competencies in relation to computers, IT, internet, and E-procurement systems. This view is fully supported by Waithaka & Kimani (2021), they observed that staff competence is an obstacle in e-procurement adoption hence continuous training is necessary to overcome it and ought to be put into practice. Findings are aligned by both TOE model and UTAUT theory. According to TOE framework staff competence is grouped under human resources, which is under organizational variables influencing the adoption of technology while UTAUT theory paved that, adoption of technology is easily attained if individuals will find easy to use the system (effort expectancy) through having enough knowledge, skills and practice of the system.

Furthermore, Mtaraziki (2020) argued that the adoption of E-procurement at Temeke Regional Referral Hospital in Tanzania depends on staff competence and expertise on E-procurement systems. However, Siwandeti, Sanga, & Panga (2021) showed that computer and IT skills have a big impact on vendors' participation in public e-procurement systems in Ilala Tanzania. In a similar vein, Gitonga *et al.*, (2020); Gitonga (2021) discovered that staff knowledge,

technological expertise, and competency have influence in E-procurement adoption to SME's in Nyeri County, Kenya.

IT Infrastructure

The adoption of E-procurement has also been observed to be significantly impacted by IT infrastructure. IT infrastructure, according to Emily (2019) , consists of hardware, software, internet connectivity, network security, and system integration. The results have been supported by both TOE model and UTAUT theory. TOE model clarified that an organization's adoption of technology is dependent on the technological context, which includes technological tools, procedures, and relevant internal and external technologies while UTAUT commented that the adoption of technology by individual is influenced by technical infrastructure supporting the application of the system (facilitating condition). The results are corroborated by those of Issa (2020), who found that IT infrastructure is a key for e-procurement adoption to public procuring entities in Tanzania. The results also support those of Ngeta & Kisimbii (2020), who found a substantial correlation between the adoption of E-procurement projects by the Kenya Revenue Authority and the availability of information technology infrastructure. Additionally, Lyimo & Abdul (2019); Mariam & Kisimbii (2020) identified that IT infrastructures in Tanzania and Kenya, respectively, is a reason for effective implementation of electronic procurement in public institutions.

Conclusion, implication and area for further studies

Technology is increasingly being incorporated into every aspect of modern life in an effort to boost institutional performance and competitiveness. In this situation, it is impossible to dispute the use of technology by organizations around the world. Novel corona virus was just a wakeup call for a creation and embracing of digital platforms in all business undertakings. Thus, in this study the key determinants of E-procurement adoption in Kenyan and Tanzanian institutions during the COVID 19 era were management support (75%); staff competency (70%), and IT infrastructure (65%). The observed determinants were supported by both TOE model and UTAUT theory. The study suggests that Kenyan and Tanzanian institutional decision-makers, policy-makers, and IT specialists should concentrate on the observed determinants of E-procurement adoption because it is perceived that during the COVID-19 era most of business operations were automated in order to avoid physical contact and minimize the spread of novel

corona virus. This study reviewed literatures during the COVID 19 era (2019 – 2022) to determine the determinants of e-procurement adoption by institutions in Kenya and Tanzania. To provide more robust results, additional study on the adoption of e-procurement by institutions in East Africa and Africa may be carried out by conducting empirical literature studies or collecting primary data.

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Barriers for Vendors' Participation in Public Electronic Procurement System in Ilala District, Tanzania

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Abstract

Public e-procurement is increasingly viewed as vital innovation and vendors' linkage for their betterment. Despite this interest, numerous barriers prevent vendors' participation in public e-procurement system are unfolded. The main purpose of this study was to identify barriers hinder vendors' participation in public e-procurement system. This study adopted a cross-sectional research design. Pragmatism philosophy guided the study. The study randomly selected total of 300 respondents by randomization of vendors under framework agreement contract, also three key informants were purposively selected. Data was collected by use of structured questionnaires for quantitative and unstructured questionnaires for qualitative. The data were analyzed using multiple regression and content analysis for quantitative and qualitative data respectively. The results from regression model revealed that, size of the organization, lack of top management support, lack of training, lack of legal/ policy support, Incompatibility with vendor's existing systems and Lack of e-procurement contract management were significant ($p < 0.05$). The study recommends public e-procurement system' stakeholders to resolve these challenges and put more conducive environment for vendors' participation in public e-procurement system, also the study recommend that, the finding should be applied as guiding model on what to be handled with care for more vendors' participation in the system.

Keywords: Barriers, Vendors' participation, electronic procurement

Introduction

Internet on digital era has become essential for every business activity. The Internet and its enabled technologies are already being viewed as the world's most revolutionary development. According to Imansyah (2018); Walker *et al.*, (2013); Al-Yahya and Panuwatwanich (2018), the

internet is driving the new economy by creating unique opportunities for countries, companies and individuals around the world. Presence of the internet has facilitated a lot of services including e-procurement system. The term e-procurement used to describe the use of electronic methods, typically over the internet to conduct transactions between awarding authorities and vendors. E-procurement developed through different stages as per technology advancement and time from purely traditional procurement to a lastly stage where internet tools and platforms replaced traditional procurement and everything done via integrated electronic systems (Choi *et al.*, 2016; Nziku and Siwandeti, 2019).

In doing business with suppliers and government, with application of internet, e-procurement has enabled government to save their citizens electronically in a timely manner, improved productivity, better service delivery, reduce paper-based work, bureaucratic control and cost savings, better quality, transparency (Adjei-Bamfo *et al.*, 2020; Sharabati, 2015; Dhaoui, 2019). Also supported by Nwankpa (2015) from USA that, the usage of e-commerce platforms (e-procurement) proved list of benefits like: gain massive transparency, costs cutting, time saving and efficiencies and improvements on procurements process. Korea republic prospered on the use of e-procurement system among 191 countries, due to friendly environment for vendors' participation on the public e-procurement system (Chong *et al.*, 2018; UN, 2014). Prosperity of e-procurement due to participation of vendors was also noted in India. According to Lewis-Faupel *et al.*, (2016), India has achieved significant quality, lead time, costs benefits of e-procurement under effective integrated e-procurement system with engaged vendor's participation, sound administrative processes, and top leadership support. Mwemezi (2015) proved that, competitive institutions everywhere are conducting business-to-business e-procurement in order to lower costs, where procurement transactions in some countries estimated to account for 10% – 30 % on developed countries and about 75% country's Gross Domestic Product (GDP) for developing countries. But most developing countries' procurement process still employ paper-system with maverick buying by approving non-qualified suppliers due to low competitive and poorly trained personnel (Uromi, 2014; Fernandes, 2015).

Tanzania, among others developing countries, had a lot of public procurement Acts amendments, from the earlier Public Procurement Act (PPA) 2001 to the current amended Public procurement Regulation (PPR) 2013 & 2016 for the sake procurement efficiency, but it still provide loophole for corrupt official (Mutangili, 2019; Mlinga, 2018). Also noted that, Tanzania's procuring entities have been utilizing IT systems to streamline and automate their purchasing and other processes over the past years. These systems highlighted by Buhalis & Leung (2018) as Electronic Data Interchange (EDI) launched in the 1960s, Enterprise Resource Planning (ERP) followed in the 1970s by being a commercial use of the Internet in 1980s and 1990s Internet widely enabled. Furthermore on technological advancement, Tanzania recently, invested millions of dollars and introduced Tanzania e-procurement system (TANePS) and safeguard through PPA 2011 (2016 amendments) and Regulations 2013, where Public Procurement Regulatory Authority (PPRA), tasked to develop, introduce e-procurement system with features: User registrations, e-Tendering, e-Purchasing, e-Auction, e-Payment and e-Contract management (Mlinga, 2018) for acquiring associate technological benefits.

Given the multitude of procedures and practices involved in the procurement process, and what the vendors' participation contributed in performance of e-procurement usage by the

government, less have been done to address, their reluctant on participation in public e-procurement system. Despite studies provided barriers hinder adoption and usage of e-procurement like: resource indivisibility and institutional environments, IT unskilful, financial resources and technological incapacity (Belokrylov, 2017). Aduwo *et al.*, (2016), on prosper and barriers to undertake e-procurement in Africa, proved that, the use of electronic system in developed countries is impressive, but usage for developing countries is very low due to organisational culture, political factors, social factors, poor ICT infrastructure, IT skills, support as supported by Resource Based View (RBV) theory that, for the firm to be competitive, it should own the resources like: financial, legal, human capital and Information (Hitt, Xu & Carnes, (2016). Furthermore, Scholars like Sarpong *et al.*, (2017); Makoba and Eliufoo (2017) revealed barriers for e-procurement like inadequate legal environment, poor vendors' participation, poor IT infrastructure, unreliable power, poor human capital and security risks. However, few studies have investigated in detail the specific barriers hinders vendors' participation in public e-procurement system (Barahona and Elizondo, 2014).

Furthermore, in developing countries vendors have slower technology adoption rate and more difficulties realizing the technology's benefit than those in developed country hence press the impact on operations transformations which affect practical involvement of vendors in public procurement opportunities Kusi *et al* (2016)

Theoretical Review

The current study Resource Based View (RBV) theory by Barney, (2001) and Diffusion on Innovation theory (DOI) by Rogers, (2003)

Resource Based View (RBV) theory

The study was Resource Based View (RBV) theory (Barney, 2001). RBV theory interprets and analyses resources of the organisations to understand how organisations can achieve sustainable competitive advantage. The study has taken resource base view (RBV) theory as the base for variables of human resources, legal, skills (training) and technological capabilities (Barney, 2001).

Nevertheless, the RBV criticised as tautological, principal role of product markets is underdeveloped due to limited prescriptive implications (Collis, 1994; Priem and Butler, 1996). Other criticism is an assumption that for a firm to be profitable in a highly competitive market needed to exploit advantageous resources. But, regardless of the criticism posed, the study at field level, found the extracted variables being robust and vital barriers for vendors participation in public e-procurement system, hence found the theory to mostly relevant and applicable for the current study.

Diffusion of Innovation theory (DOI) theory

Edler, and Yeow, (2016) proposed that the DOI theory by assessing an innovation based on five vital innovation characteristics/ attributes namely: Compatibility, relative advantage, observability, complexity and trialability. However, previous study done by Omorodion, & Jesuorobo (2020); Wu, Zsidisin, and Ross, (2007), show that, three out of five attributes namely: compatibility, relative advantage and complexity, are always related to the usage and participation in technology. Therefore, the current study adopted three for measuring their impact on resisting vendors' participation in public e-procurement system.

Methodology

The study was conducted in Ilala District in Dar es Salaam Region. Ilala District has been selected because of having a high number of vendors (1110 vendors out of 9740 countrywide under Government Procurement Services Agency (GPSA) contract framework Financial Year (FY) 2018/2019, equivalent to 11.4%) eligible for participation in public e-procurement system (URT, 2018) and this provided an opportunity to analyse the chances for potential barriers which hinder vendors in the system participation.

The study adopted cross – sectional research design since it allows for data collection for multiple variables from sample with different characteristics at a time, facilitate snapshot at a large population used to generalise the findings (Creswell, 2009) and allow the use of variety of analytical techniques, interaction of one variable over another at a time, hence cost and time saved (Flick, 2011). The sample size used was 300 respondents (including both participants and non-participants as both eligible for participation in the system) as estimated from minimum sample size from Daniel (2009) formula and Comrey and Lee (1992) recommendation.

Purposive sampling technique (non-probability sampling) was used to select study area (Ilala District) due to its richness on vendors' numbers eligible for participation in public e-procurement system and 3 key informants which are Public Procurement Regulatory Authority (PPRA), Medical Stores Department (MSD), Government Procurement Services Agency (GPSA) who are well informed about the system from design stage to current implementation level. Simple random sampling technique (Probability sampling) was used to select respondents from vendors list which obtained after randomised numbers generated by excel method done. From the vendors' level, executive personnel or representatives appointed by the management were used to fill the structured questionnaires of the study. Quantitative data were collected by using vendors' survey approach with a structured questionnaire at vendor level. A total of 310 copies of the questionnaire were administered to representative of vendors selected and 300 questionnaire (96.8%) were neatly filled and worth for analysis.

Qualitative data were collected using Key Informant Interview (KII). A total of 3 were conducted with key informants (Focal person for system) selected basing on their knowledge on public e-procurement system as directed by respective institution's management. The mixed approach was employed and enabled researcher to collect diverse type of data which gave reach of information in relation to the focus of the study. Secondly, it helped to neutralised any biases inherent in a single technique (Creswell, 2009). In addition, the quantitative technique predominated the qualitative technique and consequently, qualitative data and information was used to supplement those gathered from quantitative technique.

Qualitative data were transcribed, categorized, coded then grouped in themes and analyzed using thematic analysis technique with support ATLAS.ti software. Quantitative data in numerical data were put to computer code sheets for processing with the aid of SPSS version 25, then factor analysis done for factors reduction and the linear multiple regressions used to determine how those barriers influencing vendors' participation in public e-procurement system. Descriptive statistics frequencies, correlation using Pearson chi-square and percentages were reported guided by research objectives.

Thus, for model fit, assumptions was tested using different ways, normality was tested by using the Kolmogorov-Smirnov and Shapiro-Wilk test, both test yielded an insignificant p-value ($p > 0.05$) indicating that there was normal distribution. Outliers checked for both independent variables and dependent variable through obtaining the standardized residual values and none of

them had values above 3.3 or less than 3.3, thus there were no outliers (Tabachnick and Fidell, 2007). Multicollinearity was tested to determine there was strong correlation between independent variables that would have caused problem when assessing important of each independent variable, where Pallant, (2011); Field (2009) put threshold that, inter-correlation of variables ranging from 0.080 and above signal multicollinearity problem. Each category of variables analysed was tested for correlation as seen on each correlation result sections and none of variables inter-correlated equal or exceeds 0.08 thus, there is no evidence for multicollinearity. Lastly, independence test made using Durbin- Watson test, were statistic value close to 2 suggest lack of serial correlation while value far from 2 suggest serial correlation, where from summary of each model analysis for regressions at each category, prove Durbin-Watson being close to 2 and no anyone far from 2 hence all variables are independence.

Multiple regression formula is given as:

$Y_1 = a + b_1X_1 + b_2X_2 + b_3X_3 + e$ Internal barriers

$Y_2 = a + b_1X_1 + b_2X_2 + e$ External barriers

$Y_3 = a + b_1X_1 + b_2X_2 + e$ Perceived risks on e-procurement usage

Table 3: Measurement Levels

1. VARIABLE (BARRIERS) MEASUREMENT LEVELS-	TYPE OF THE VARIABLE	STATUS OF THE VARIABLE
Internal Barriers:		
X ₁ Size of the organization	Categorical	Predictor
X ₂ Presence of unnecessary bureucracy		
X ₃ Lack top management support		
External barriers:		
X ₁ Lack of training		
X ₂ Lack of legal/ policy support		
Perceived risks on e-procurement usage		
X ₁ Incompatibility with vendors existing system		
X ₂ Lack of e-procurement contract support		
Y=Factors influencing participation in public e-procurement system	Continuous	Output

Source: Literature and constructs from RBV theory (Barney, 2001).

Data reliability and Validity

Before actual data collection, research instruments were calibrated by conducting a pilot survey to 30 vendors' respondents from Ubungu, Kinondoni and Temeke districts at Dar es Salaam to evaluate consistency, reliability and clarity of the instruments. To ensure validity primary data were cross checked against secondary data through comparison for qualify their fit to the current study. Vital modifications were done to some questions for both structured and unstructured questions. Efforts were also done to test internal consistence of items using statistical measure, where Cronbach's alpha coefficient was used and the result indicated a good internal

consistency of 0.972 reliabilities which is above acceptable standard of 0.7 (Creswell, 2009). The Cronbach's alpha was 0.918 for general of 35 items used for the study before factor reduction done using factor analysis. High alpha is good as it is caused by high variance, hence indicating a strong internal consistency among the measures.

Results And Discussions

Demographic Features of the Respondents

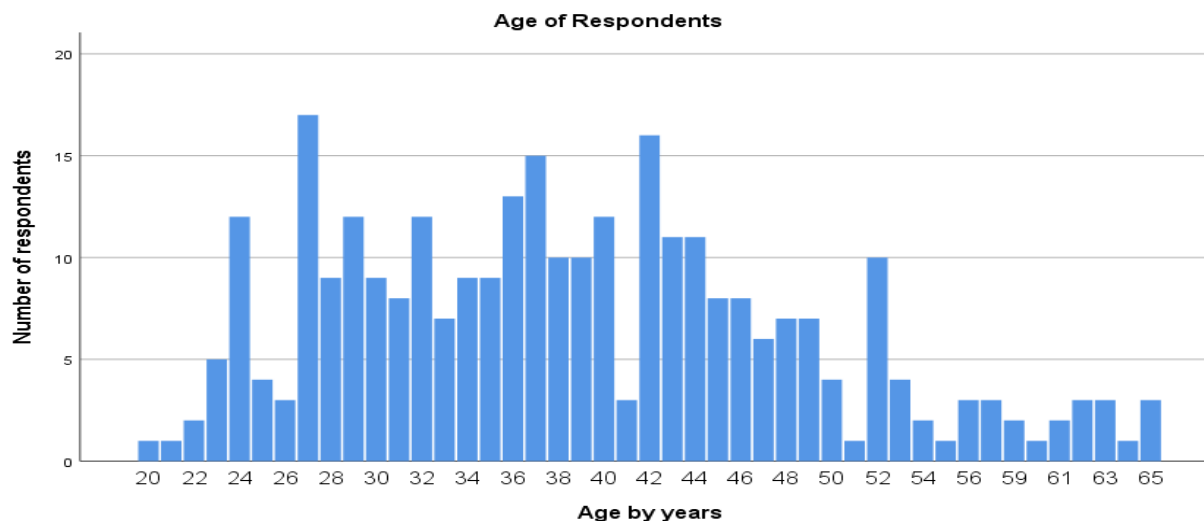
A total of 187 male equivalent to (62%) and 113 female equivalents to (38%) respondents were involved in this study. Most male were found to many vendors organizations and acted as directors or spoken person for the organizations hence engaged to the study. In terms of the age, it ranged from 18 to over 65 years; were respondents with 24-50 years above 60% and were the highest, and had advantage to the study because they had participation into new established system for work need experienced and active as respondents. About Job title, directors were 101 (34%), deputy directors 52 (17%), Managers were 90 (30%) and lower staff 57 (19%), which were very advantages also to the study, due to the fact, investment like this require person with strong decision power in the organization. On education levels, participants who had university education (First degree, PGD, Masters, and PhD) were 41%, college education (Certificate and Diploma) were 51% and others (Secondary and primary education as per respondents) were 8%, hence the education level of respondents, reflect that, they were literate enough to give clear pictures on perceived barriers hinders participation in public e-procurement system. Under work experience, the study showed that, respondents with experience between 1 to 10 years count 75% and respondents with experience between 11 to 32 years counts 25 %, this found also advantageous for the study due to the fact that, they were experienced enough to identify barriers hinders vendors' participation in public e-procurement system. The public institutions that were interviewed as part of the key informants were PPRA, MSD and GPSA, all involved the with use focal person with public e-procurement system information as approved by their respective management for participation in interview. Table 2, figure 1 and figure 2 shows demographic information

Table 5: Demographic Information

Variable	Frequency (n= 300)	Percent (%)
Sex		
Female	113	38
Male	187	62
Job Title		
Directors	101	34
Deputy Directors	52	17
Managers	90	30
Lower staff	57	19
Education Levels		
Primary & Secondary Education	25	8
Certificate	74	25
Diploma	79	26
Degree	94	31
Postgraduate Degree (PGD)	6	2
Masters	21	7
Ph.D	1	1

Source: Field Survey, 2019

Figure 1: Age of the respondents in the study



Source: Field Survey, 2019

Figure 2: Work experience for the respondents in the study



Source: Field Survey, 2019

4.2 Internal factors barriers for vendors' participation in public e-procurement system

The potential internal barriers for vendors' participation in public e-procurement system were mostly derived from literature and some at field area as vendors' perceptions. The factors were subjected to factors analysis (using principal component analysis) to scale out most apparent factors in the study before they were subjected to inferential analysis to identify significance

influence on hindrance.

The suitability of data for factor analysis assessed using Kaiser-Meyer-Olkin (KMO) to measure sampling adequacy as well as Barlett's test of sphericity. Results in table 6 show a KMO measure of 0.853 indicating a considerable value of sampling adequacy for factor analysis is beyond the cut-off point of 0.7 (Kaiser, 1974). The Barlett test of sphericity had a significant value ($p=0.000$) and chi-square of 1764.139, which support the factorability of the correlation matrix and thus, factor analysis was appropriate (Pallant, 2011)

Table 6: KMO and Bartlett's Test^a

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.853
Bartlett's Test of Sphericity	Approx. Chi-Square	1764.139
	df	66
	Sig.	0.000

a. Based on correlations

The factors extraction was done to identify the factors to be used for inferential analysis. Factors extracted by considering only those with eigenvalue great than 1 as recommend (Field, 2009 and Pallant, 2011). The eigenvalue associated with each factor show the variance explained by particular linear component. Table 7 represents the eigenvalues associated with each factor before extraction and after extraction. The factors before extractions were 12 and after extraction, only 3 factors were retained explained total of 66.371% of the variance.

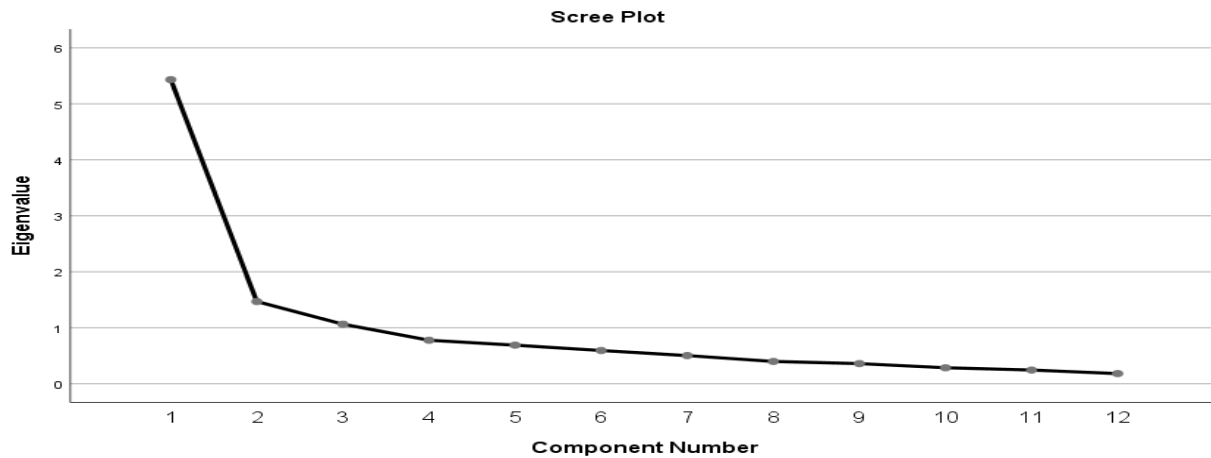
Table 7: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.432	45.266	45.266	2.775	23.128	23.128
2	1.469	12.238	57.504	2.656	22.132	45.259
3	1.064	8.867	66.371	2.533	21.112	66.371
4	.777	6.477	72.848			
5	.690	5.748	78.597			
6	.594	4.948	83.545			
7	.503	4.193	87.738			
8	.399	3.322	91.060			
9	.360	3.000	94.060			
10	.286	2.383	96.443			
11	.245	2.043	98.485			
12	.182	1.515	100.000			

Extraction Method: Principal Component Analysis.

a. Type of respondents= Vendors with GPSA framework contract (n=300)

Figure 3: Scree plot for identify number of extracted factors from internal factors



Source: Field survey, 2019.

Once the number of components identified, the study went further to determine the patterns of loading for easy interpretation. The Varimax rotation was chosen which does not tolerate correlation of variable beyond 0.8 and factors with loading of 0.3 and above were retained as observed by Pallant (2011). Hence, from factor analysis a total of 3 factors namely size of the organization in term of employees, lack of top management commitment and presence on unnecessary bureaucracy were extracted for multiple regression analysis to determine their influence as internal barrier for vendors' participation in public e-procurement system.

Correlations Results

The results from factor analysis subjected to correlation test before going further for multiple regressions as shown in the table 8 explore the Pearson's Correlations for establishing the relationships between the identified external barriers variables.

Table 8: Correlations of vendors' Internal barriers for public e-procurement system

		Size of the organization	Presence on unnecessary bureaucracy	Lack of Top management commitment
Size of the organization	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	300		
Presence on unnecessary bureaucracy	Pearson Correlation	.272**	1	
	Sig. (2-tailed)	.000		
	N	300	300	
Lack of Top management commitment	Pearson Correlation	.477**	.366**	1
	Sig. (2-tailed)	.000	.000	
	N	300	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

Table 8 result reveal that, there is significant correlation between all of the 3 extracted factors for internal barriers for vendors' participation in public e-procurement system, hence, further analysis allowed as the recommended correlation should not exceed 0.8 for absent of multicollinearity (Field, 2009).

Multiple linear regression results

The preliminary result of multiple line regression analysis to the internal barrier toward vendors' participation in public e-procurement system, table 9 revealed that 15.5% of the variance in barriers for vendors' participation in public e-procurement system was attributed to lack of top management support, presence of unnecessary bureaucracy and size of the organization ($R^2=0.155$, adjusted $R^2=0.146$ and $F=18.091$ at $p=0.000$). Hence the overall fit of the model was statistically significant ($p=.0.000$) which means the model had enough explanatory power to predict the influence of internal barriers on vendors' participation in public e-procurement system

Table 9: Summary on regression model fit

Model	R	Adjusted R Square	Std. Error of the Estimate	Change Statistics						
				R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson	
1	.394 ^a	.155	.689	.155	18.091	3	296	.000	1.928	

a. Predictors: (Constant), Lack of Top management commitment, Presence on unnecessary bureaucracy, Size of the organization in term of employees

b. Dependent Variable: internal factors hinders vendors' participation in public e-procurement

The statistically strong significant predictors of internal barrier for vendors' participation in public e-procurement system were size of the organization ($B=0.121$, $t=3.363$, $p=0.001$) that implies, the smaller the vendors the greater the difficulty for their participation in public e-procurement system and lack of top management support ($B=0.160$, $t=3.117$, $p=0.002$). Therefore, among the identified internal barriers, size of the organization and top management factors were sufficient factors to cause challenges in vendors' participation in public e-procurement system. The finding corresponding with studies done by Pop, (2011); Uyarra, (2014); Al-yahaya, (2018), Ancarani *et al.*, (2019), where both found significant on size of the organization as top management support as among of barriers hinder e-procurement adoption and implementation by vendors from Roma, Saudi Arabia, UK and Canada respectively, and the current study proved as barriers on participation public e-procurement. The key informant from MSD also had the same argument on top management readiness for vendors' participation:

“Actually, top management is mostly the owners of the business, and they are the one who have a final say in the adoption or participation of his/her organization in any innovation or making any other strategic decision. We as the government must keep convincing them to invest in public e-procurement

because it offers a lot of benefits to us as government and them also as vendors.” (MSD, focal person, 7th, May, 2019)

Table 10: Multiple regression results on internal barriers for vendors’ participation in public e-procurement system

Variables	Unstd. Coefficients		Stand. Coefficients		t	Sig.	VIF
	B	S. E	B				
(Constant)	2.868	0.237			12.123	0.000	
Size of the organization in term of employees	0.121	0.036	0.206		3.363	0.001	1.314
Presence on unnecessary bureaucracy	0.082	0.048	0.098		1.694	0.091	1.171
Lack of Top management commitment	0.160	0.051	0.197		3.117	0.002	1.404

The result for remain factor of internal barrier i.e. presence on unnecessary bureaucracy (B=0.082, t= 1.694, p=0.091), which do not significantly cause barrier in vendors’ participation in public e-procurement system.

External barriers for Vendors’ participation into Public e-procurement system

The external barriers for vendors’ participation in public e-procurement system were mostly derived from literature. For focusing purpose for factors specific fit the current specific objective, variable were subjected to factors analysis (using principal component analysis) before subjected to inferential analysis to identify significance influence on hindrance.

The suitability of data for factor analysis assessed using Kaiser-Meyer-Olkin (KMO) to measure sampling adequacy as well as Barlett’s test of sphericity. Results in table 11 show a KMO measure of 0.862 indicating a considerable value of sampling adequacy for factor analysis is beyond the cut-off point of 0.7 (Kaiser, 1974). The Barlett test of sphericity had a significant value (p=0.000) and chi-square of 1525.406, which support the factorability of the correlation matrix and thus, factor analysis was appropriate (Pallant, 2011)

Table 11: KMO and Bartlett's Test^a

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.862
Bartlett's Test of Sphericity	Approx. Chi-Square	1525.406
	df	78
	Sig.	.000

a. Based on correlations

Also, external factors extracted to be used for inferential analysis, were only those with eigenvalue great than 1 as recommend (Field, 2009 and Pallant, 2011) were considered for further analysis. The eigenvalues associated with each factor before extraction and after extraction as clearly indicated in the table 12 below. The factors before extractions were 13 and after extraction, only 2 factors were retained explained total of 54.768% of the variance.

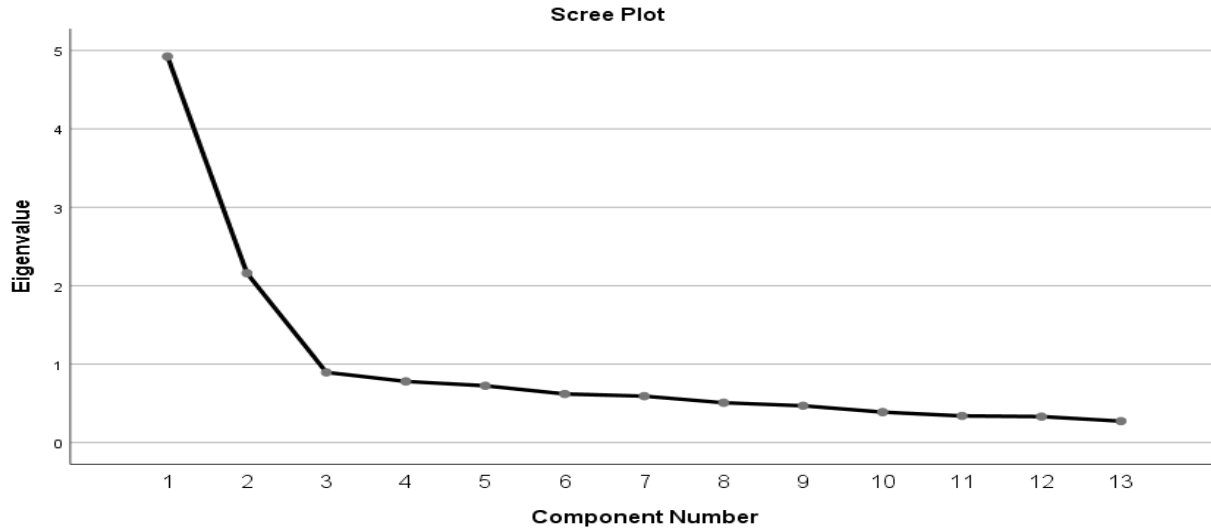
Table 12: Total Variance Explained

Component	Initial Eigenvalues ^a			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.624	37.298	37.298	2.207	31.368	31.368
2	1.229	17.469	54.768	1.646	23.399	54.768
3	.503	7.149	61.917			
4	.428	6.080	67.996			
5	.382	5.432	73.428			
6	.342	4.867	78.295			
7	.294	4.172	82.467			
8	.267	3.802	86.268			
9	.239	3.400	89.669			
10	.214	3.037	92.706			
11	.189	2.690	95.396			
12	.179	2.540	97.935			
13	.145	2.065	100.000			

Extraction Method: Principal Component Analysis.

a. Type of respondents= Vendors with GPSA framework contract (n=300)

Figure 4: Scree Plot for identify number of extracted external factors



The Varimax rotation was also chosen which does not tolerate correlation of variable beyond 0.8 and factors with loading of 0.3 and above were retained as observed by Pallant (2011). Hence, from factor analysis a total of 2 factors namely lack of training and lack of legal/ policy support extracted for multiple regression analysis to determine their influence as external barrier for vendors' participation in public e-procurement system.

Correlations Results

The results in the table 13 had shown the Pearson's Correlations for establishing the relationships between the identified external barriers variables.

Table 13: Correlations of vendors' external barriers for public e-procurement system

		Lack training to vendors	Lack of legal/policy support
Lack training to vendors	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	300	
Lack of legal/policy support	Pearson Correlation	.195**	1
	Sig. (2-tailed)	.001	
	N	300	300

**. Correlation is significant at the 0.01 level (2-tailed).

The results above had significant correlation between all of the 2 extracted factors for external barriers, which allow further analysis to be done as the recommended correlation as the lack multicollinearity.

Multiple linear regression results

The preliminary result of multiple line regression analysis to the external barriers on vendors' participation in public e-procurement system, table 14 revealed that 14.0% of the variance in external barriers for vendors' participation in public e-procurement system was attributed to lack

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of training and lack of legal/ policy support ($R^2=0.140$, adjusted $R^2=0.134$ and $F=24.099$ at $p=0.000$). Hence the overall fit of the model was statistically significant ($p=0.000$) which means the model had enough explanatory power to predict the influence of external barriers on vendors' participation in public e-procurement system

Table 14: Summary on regression model fit

Model	R	Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change	Durbin-Watson
					R Square Change	F Change	df1	df2		
1	.374 ^a	.140	.134	.694	.140	24.099	2	297	0.000	2.001

a. Predictors: (Constant), Lack of legal/policy support, Lack training to vendors

b. Dependent Variable: External Factors hinder vendors participation in public e-procurement system

Finding as indicated in table 15 below, indicated that, lack of training is strongly significant influence ($B=0.221$; $t=4.008$; $p=0.000$), this imply that, as the vendor become more literate on how to use the system and associated impact to his/her business the more there probability on participation to it willingly without much energy on pushing them. Mose *et al.*, (2013); Aduwo et al., (2016); Karabag and Tan, (2018), are the corresponding studies found significant on these factors to uptake e-procurement from Kenya, Nigeria and Turkey respectively. Key informant from PPRA argued that,

“To be honest, vendors with adequate IT skills and competencies personnel are extremely vital for the quick participation in public e-procurement. We at the moment lack such vendors due to limited resources and that is the reason why I feel they are not participating in public of e-procurement timely.”

Table 15: Multiple regression results on external barriers for vendors' participation in public e-procurement system

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	2.268	0.311		7.283	0.000	
Lack training to vendors	0.221	0.055	0.220	4.008	0.000	1.039
Lack of legal/policy support	0.265	0.055	0.262	4.781	0.000	1.039

Also, the results as indicated in table 15, revealed that, lack of legal /policy support ($B=0.262$; $T=4.781$; $P=0.000$), yield strong significant too as external barrier for vendors' participation in public e-procurement system. This again, implies that, as the vendors lacking legal guidance on their investment for participation in public e-procurement system, then, they will be reluctant to accept for participation. Corresponding to study done by Kajewski and Weippert (2004); Agwu and Murray, (2015); Githinji and Were, (2018), revealed that, the legal aspects concerning an electronic environment were barriers to e-procurement, due to lack of signed documents and face-to-face agreements between the parties on both

sides. Therefore, if the government put more effort on putting clear guidance and policy for public e-procurement system, more vendors will be attracted to participate in the system. From key informant view from PPRA focal person, he argued that,

“....yeah, obviously regulations and policies are very vital because e-procurement takes you beyond geographical boundaries and conflict of interest always arises between the stakeholders. Laws must be consistent with international laws otherwise there will always be a conflict of interest, actual we tried but we have a lot to do as we just started this kind of digital life.” (PPRA, system coordinator, 8th, May, 2019)

The claim from vendors found a little bit contrary on what the government did so far, vendor X, argued that,

“Legal issues are one of the biggest hurdles in the participation in public e-procurement and other e-commerce solutions because the government hasn’t developed powerful legislative framework for e-procurement transactions security and conflict resolution between the suppliers and buyers.” (Vendor X, 3th, April, 2019)

Perceived risks under e-procurement usage hinder vendors’ participation into public e-procurement system

Perceived risks under e-procurement usage hinders vendors’ participation in public e-procurement system were mostly derived from literature and research perception for vendors acceptance or rejection. The specific objective variables were also subjected to factors analysis (using principal component analysis) before forwarded for inferential analysis to identify significance influence on hindrance.

The suitability of respective data for factor analysis assessed using Kaiser-Meyer-Olkin (KMO) to measure sampling adequacy as well as Barlett’s test of sphericity. The test results in table 16 show a KMO measure of 0.850 indicating a considerable value of sampling adequacy for factor analysis is beyond the cut-off point of 0.7 (Kaiser, 1974). The Barlett test of sphericity had a significant value ($p=0.000$) and chi-square of 11194.434, which support the factorability of the correlation matrix and thus, factor analysis was appropriate (Pallant, 2011)

Table 16: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.850
Bartlett's Test of Sphericity	Approx. Chi-Square	11194.434
	df	45
	Sig.	.000

Perceived risks extracted for inferential analysis, were only those with eigenvalue great than 1 as recommended (Field, 2009 and Pallant, 2011) and were only the one considered for further

analysis. The eigenvalues associated with each factor before extraction and after extraction are clearly indicated in the table 17 below. The factors before extractions were 10 and after extraction, only 2 factors were retained explained total of 59.153% of the variance.

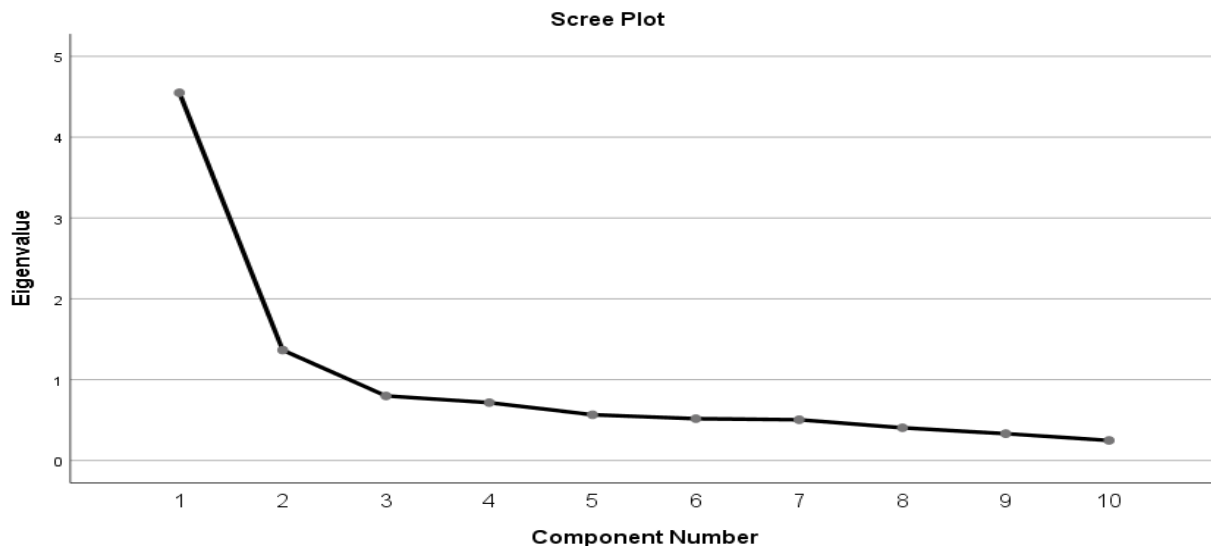
Table 17: Total Variance Explained

Component	Total	Initial Eigenvalues		Rotation Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.549	45.494	45.494	3.205	32.051	32.051
2	1.366	13.659	59.153	2.710	27.102	59.153
3	.799	7.986	67.138			
4	.716	7.156	74.294			
5	.566	5.656	79.950			
6	.517	5.171	85.121			
7	.504	5.036	90.157			
8	.405	4.047	94.204			
9	.332	3.318	97.522			
10	.248	2.478	100.000			

Extraction Method: Principal Component Analysis.

- a. Type of respondents= Vendors with GPSA framework contract (n=300)

Figure 5: Scree plot for identifying number of perceived risks extracted



The Varimax rotation was chosen again for perceived risks variable as it does not tolerate correlation of variable beyond 0.8 and factors with loading of 0.3 and above were retained as observed by Pallant (2011). Hence, from factor analysis a total of 2 perceived risks namely

Incompatibility of vendors' existing system into public e-procurement system and lack of e-procurement contract management were extracted for multiple regression analysis to determine their influence on vendors' participation in public e-procurement system.

Correlations Results

The results of extracted variables explored using the Pearson's Correlations in establishing the relationships between the perceived risks to be used for further analysis.

Table 18: Correlations of risk on vendors' participation in public e-procurement system

		Incompatibility with vendor's existing systems	Lack of e-procurement contract management
Incompatibility with vendor's existing systems	Pearson Correlation Sig. (2-tailed) N	1 300	
Lack of e-procurement contract management	Pearson Correlation Sig. (2-tailed) N	.159** .006 300	1 300

**. Correlation is significant at the 0.01 level (2-tailed).

The results shown on table... show that there is significant correlation between incompatibility with existing vendors' system and lack of e-procurement contract management ($r=0.156$; $p=0.006$), hence further analysis guaranteed as the variable are statistical independence.

Multiple Linear Regression Results

The regression analysis was carried out to show the extent the dependent variable (vendors' participation in public e-procurement system) are influenced by perceived risks of vendors system to be incompatible with public e-procurement system and lack e-procurement contract management.

Table 19: Summary on regression model fit

Model					Change Statistics					
	R	Adjusted R Square	Std. Error of the Estimate	R Square	Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.268	.072	.721	.072	.072	11.461	2	297	.000	1.947

a. Predictors: (Constant), Lack of e-procurement contract management, Incompatibility with vendor's existing systems

b. Dependent Variable: Perceived risks influence on vendors' participation in public e-procurement system

The preliminary result of multiple linear regression analysis to the perceived risks on vendors'

participation in public e-procurement system, table 19 revealed that 7.2% of the variance in perceived risks for vendors' participation in public e-procurement system was attributed to incompatibility of vendors existing system to public e-procurement system and lack e-procurement contract management ($R^2=0.072$, adjusted $R^2=0.065$ and $F=11.461$ at $p=0.000$). Hence the overall fit of the model was statistically significant ($p=.000$) which means the model had enough explanatory power to predict the influence of perceived risks on vendors' participation in public e-procurement system.

The results table 20 show that, perceived risks on vendors participation in public e-procurement system on incompatibility of vendors system to public e-procurement system ($B=0.132$; $t=2.502$; $p=0.013$) and lack of e-procurement contract management ($B=0.197$, $t= 3.364$, $p=0.000$). The results show that all the identified perceived risks on e-procurement usage are strongly significant hinder vendors' participation in public e-procurement system if are not well controlled for better.

Table 20: Multiple linear regression results on perceived risks hinder vendors' participation in public e-procurement system

Variables	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	VIF
	B	Std. Error	Beta				
(Constant)	2.975	0.305			9.755	0.000	
Incompatibility with vendor's existing systems	0.132	0.053	0.142		2.502	0.013	1.026
Lack of e-procurement contract management	0.197	0.054	0.206		3.634	0.000	1.026

a. Dependent Variable: Factors influencing participation

Corresponding studies found the same were like, Ramkumar *et al.*, (2016); Naik and Bobade, (2018), revealed information security lacking due to lack of e-procurement contract and systems being incompatible due rapid change on technology, hence recommend suppliers involvement from design stage to its implementation.

Key informants said that introduction of e-procurement system in the country requires capacity enhancement of bodies responsible for overseeing and undertaking procurement functions, adding that “*current capacities of such bodies in terms of resources and skills needed to manage the e-procurement systems are not adequate.*”

General extracted variables on barriers for rank purpose on the severity

Table 21: Descriptive analysis results for all extracted factors

Variables	Mean	S.E	Rank
Lack training to vendors	4.4267	.74373	1
Lack of legal/policy support	4.3833	.73815	2

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Illegality of e-procurement contracts	4.3733	.78059	3
Incompatibility with vendor's existing systems	4.3600	.79950	4
Presence on unnecessary bureaucracy	4.3533	.88945	5
Lack of Top management commitment	4.3433	.92102	6
Size of the organization in term of employees	4.0267	1.27201	7

Source: Field survey, 2019

A close scrutiny of the result in table 21 reveals that, the extracted 7 out 35 factors investigated in the surveys, lack of training to vendors with Mean value of 4.4267 emerged as the number one factor in terms of having adverse effect on the vendors' participation in public e-procurement system. Next to this are the lack of legal/ policy support (4.3833); illegality of e-procurement contracts (4.3733); Incompatibility with vendor's existing systems (4.3600); Presence on unnecessary bureaucracy (4.3533); Lack of Top management commitment (4.3433) and Size of the organization in term of employees (4.0267) respectively. This help to know which problem to deal with first as the resources are scarce to handle them all, and from qualitative side, this were cry from PPRA as coordinators, as they found vendors lacking knowledge on potentiality of public e-procurement system

Implications of the Results on the Theories and Related Studies

The theoretical implication of the study is that, though the study used the Resources Based View (RBV) theory and Diffusion of Innovation theory (DOI) as its basis, the naming extracted variables: training (knowledge), legal/policies, top management support (human resources), bureaucratic process, complexity and compatibility from both theories respectively for participation in public e-procurement system, they are high supported statistical that, by lacking of them, vendors participation in public e-procurement system won't be possible, therefore theories applied contributed a lot on giving to light critical issues to be taken on board for vendors' participation.

Further, the findings confirmed the RBV on antecedents' of training (knowledge), management support (human resources) and legal are crucial resources and capabilities for any organization being competitive advantages on new innovation in place. According to the DOI antecedents, compatibility, complexity and relative advantages from finding, confirmed to be strong drives which hinder or support vendors' participation in public e-procurement system, need to be taken onboard. The results has also confirmed by study by Basri *et al.*, (2011) at Malaysia, successful vendors' participation must consider degree compatibility, trust and government policies and regulations for ease going in the technological advancement. Furthermore, Irma *et al.*, (2016); Naik and Bobade, (2018), supported the current study finding, by found significant barriers on adoptions in e-procurement/e-business technology being: lack of resources, incompatibility, lack of training, poor government and management support and negative attitude toward technology, where these all supported by current study theories ' antecedents. Therefore, the current study

found the applied theories being relevant and statistically justified, hence had positive implication on their applicability.

Conclusion and recommendation

The intention of the study was to identify barriers facing vendors' participation in public e-procurement system in Ilala district, Tanzania. Regarding internal organization barriers, it was found that size of the organization and lack of top management support are challenges in vendor's participation in public e-procurement system, which support theory arguments guiding the study, that the capabilities are the crucial equipment on achieving competitive advantages by any organization. The other factor, presence of unnecessary bureaucracy found insignificant statistically, but it still has implication on hindering vendors to participate in public e-procurement system if the respective management cannot give concentration and timely consideration on decision made from management level for participation as it has slight significant. Thus the study recommend here that, for the big organization should be motivated to participate using their own resources after understanding the benefits behind it, but for small business enterprises, the policy makers on public e-procurement system, should support on some areas including funding for set up cost, also top management of the vendors should be involved on stage to stage for public e-procurement system development.

Concerning the external barriers it was found that both lack of training and lack of legal/ policy support were the factors causing challenges in vendors' participation in public e-procurement system. And regression analysis disclosed that all these external factors were considered as the challengers to participation which also highly supported by guiding theory, as found among strong resources for organization being competitive advantages are skilled human resources and legal structures among others. The study thus recommend, proper training should be given to vendors depending on their special need and capturing capabilities and general one as they differ on understanding and education background also proper and clear guiding policies should put in place for vendors attraction on participation in the system. From vendor side, the study recommends that, due to employees turnover, for the incoming staff, training should be compulsory and should be implemented. Also the study recommends that, there is a need to a review of the existing public procurement legal framework and policies to cater for vendors' participation in public e-procurement clearly. Beyond domestic preference available, there should be a sort of competitive advantage for vendors when tendering for contract with government via public e-procurement system. The current fees charged on registration should recheck to attract more vendors as their claim that, by paying that amount of thirty thousand does not guarantee to acquire opportunity.

Lastly, the two extracted variable by factor analysis concerning perceived risks on usage of e-procurement system were reviewed and the result of significant correlation analysis showed that Incompatibility with vendor's existing systems and lack of e-procurement contract management, and also inferential analysis found statistical significant causing the challenges in vendors' participation in public e-procurement system. This implies that, if vendors are not well involved from design stage for compatibility and security assurance on the investment about to make, it likely not participate in public e-procurement timely, hence delay on public achievement on her purpose of effective and efficiency procurements. Also, the study recommends that, stakeholders involved in public e-procurement system development and monitoring should introduce friendly and less complicated features which can be easy for vendors to integrate and participate without need of making new

ICT equipment's investment. But also, formal e-procurement contract management should be enhanced clearly so that, it can attract more vendors to participate by virtual trust highlighted. The e-procurement system must have mechanisms to identifying and authenticating the user who places an order so that the supplier knows it is safe to fulfill the order.

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Effect of Service Quality on Customer Retention at Mount Kilimanjaro National Park (Kinapa) in Tanzania

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Abstract

The paper has investigated the effect of service quality (SQ) on customer retention at Mount Kilimanjaro National Park (KINAPA) using cross-sectional research and a sample of 104 respondents. Questionnaires, interviews and documentary reviews were used to collect data. Descriptive statistics, binary logistic regression and multiple responses were used to analyze data. The study found that tangibles, assurance, responsiveness, empathy and reliability were significantly affecting customers' retention. The study concluded that service quality significantly affects customer retention. It was recommended that the quality of service be improved to retain a reasonable number of customers.

Key words: Service quality, Customers' retention and KINAPA

Introduction

Business performance depends on services quality which retains customers(Rahaman *et al.*, 2020)Alketbi *et al.* (2020)in Dubai and Fida *et al.*(2020) in Oman supported Rahaman *et al.*(2020) in Bangladesh. Meanwhile, Ali *et al.* (2021)in Iraq and Gogoi (2020) in India had similar observations. It was also noted that SQ dimensions include tangibles, reliability, assurance, empathy and responsiveness (Parasuraman *et al.*, 1991). Similarly, Han *et al.* (2021) in China studied similar topic but with respect to health services. Therefore, this study failed to link the service quality and customer retentions. In case of Africa, Abdul-Qadiret *al.* (2021) in Nigeria and Achieng (2021)in Kenya linked the service quality and customers' retention but was not done in Tanzania. Kamna (2021) in Tanzania studied this topic with respect to banking industry while Matolo andSalia (2021)based on Serengeti National Park (SENAPA). Still their

conclusions would not address the KINAPA concerns. While, tourism is a potential economical and the country being one of the world's poorest countries. KINAPA alone earns about \$50 million a year which is 45% of all income generated by Tanzania's 15 national parks (TANAPA, 2019).

Previous studies link service quality and customers' satisfaction, retention and loyalty (Achieng, 2021; Ali *et al.*, 2021; Han *et al.*, 2021; Gogoi, 2020). However, these studies were not conducted in Tanzania thus, such findings cannot be generalised to the Tanzanian context. The researcher was convinced that there was a need to study the effects of service quality on customers' retention due to its vitality as an economic source for the country.

Statement of the Research Problem

Despite its economic vitality, KINAPA has a doubtful tourists' retention capacity (TANAPA, 2019). While there is a limited knowledge on the topic, little attention has been placed on this topic. Previous global studies show that SQ was linked to customers' retention which ultimately fostered sales in tourism (Gogoi, 2020 and Rahaman *et al.*; 2020); Mashenene, 2019; Meesala and Paul, 2018). In Tanzania Matolo & Salia (2021) and Burhan & Kalinga (2018) in their work ignored tourism industry. Therefore, the question of whether tourists at KINAPA has not been thoroughly addressed in favor of the national economy. Therefore, this study was designed to examine the effect of service quality on the customers' retention at Mount Kilimanjaro in Tanzania.

Research Objectives

To determine the effect of service quality dimensions on customer retention at Mount Kilimanjaro National park

Literature Review

The paper in this section provides both theoretical and empirical literature review as provided hereunder:-

Theoretical Literature Review

This study was underpinned by SERVQUAL model which was developed by Parasuraman *et al.* (1988). The model perceives the notion of service quality into five constructs as follows: - tangibles (physical facilities, equipment, staff appearance, etc.), reliability (ability to perform service dependably and accurately); responsiveness (willingness to help and respond to customer needs) and assurance (the ability of staff to inspire confidence and trust). SERVQUAL represents service quality as the inconsistency between a customer's expectations and service quality. It is unclear if all customers will perceive and react equally to service quality. Failure to respond to such a question by the model calls for a study to be performed. The SERVQUAL model is relevant in that provides variables of service quality such as tangibles, reliability, responsiveness and assurance used in this study.

Empirical Literature

Effect of Service Quality on the Customers' Retention

Service quality is the customer's perception of the general service performance of a company in a long-term setting (Bengtsson *et al.*, 2020). Even though it is clear what service quality entails, an issue is how to properly measure if a particular service is of high quality, due to it being based on perceptions and perceptions being very subjective to the individual. John and Adebayo (2021) and Parasuraman *et al.* (2018), define service quality as an attitude or global judgment about overall excellence or superiority of service with a comparison of expectation and performance as measuring tools. Service quality from the customer's perspective is defined as, Service Quality = Perception – Expectation (Parasuraman *et al.*, 2018). Service quality is nothing but the difference between the service expectation and the service received by the customer. Service quality (SQ) is the effectiveness and efficiency perception of an organisation's offered services. Quality perception is a topic of interest for service providers and consumers, whereby quality refers to meeting customer expectations (Parasuraman *et al.*, 2005). The SERVQUAL scale was initially developed to estimate the organisational service quality based on nine aspects. Technological advancement enables users worldwide to use mobile phones for personal and commercial purposes (Kaatz, 2020). Mobile-based services are an extension of electronic services (e-services), whereby M-Comm is the extension of E-Comm, enabling users to conveniently utilise the M-Comm via personal mobile devices (Ghazali *et al.*, 2018). Meanwhile, the SITEQUAL

scale was proposed by Webb and Webb (2004) to measure the website service quality with four dimensions (Sukoco and Wu, 2011). Parasuraman et al. (2005) also proposed the 11-dimensional scale to estimate the E-service quality. There is an ongoing debate on e-services quality as more people engage in M-Comm. Hence, scholars commonly use SERVQUAL and ESQUAL to assess the quality attributes of the websites, e-commerce, or electronic portals (e-portals) (Chi, 2018; Jay and Zhang, 2016). Nonetheless, SERVQUAL and ESQUAL cannot seize the full-service quality attributes of e-portals offering commerce services.

Delivery of a relevant consumer experience is the hallmark of marketing activities (Zhang and Prybutok, 2005). The positive and engaging customer experience delights the customer and leads to the retention of the customer or rebuying of the product/service by the satisfied customers (Gawron and Strzelecki, 2020). The firms can retain the customer by delivering quality services and enriching the users' experiences with the appropriate SQ attributes that instigate customer satisfaction that promotes customer retention (Chen et al., 2021; Nani and Lina, 2021). For the current study, the revisit intention represents customer retention.

The user-level service quality perception is the consumer's judgment towards the M-Comm service, distinct and dominating other services (Liu et al., 2019). The e-services emerge from the service quality perception, conceptualised through information quality and system quality dimensions (Chi, 2018). 2.3. M-Comm service quality dimension Service quality is an important topic resulting from growing online electronic services, with the measurement scale SERVQUAL by Parasuraman et al. (1988). The traditional model was based on reliability, assurance, tangibility, empathy, and responsiveness with 22 expectancy-based evaluative statements (Parasuraman et al., 2005). Appearances and outlook are the main features that attract users, with the E-Comm website design as the first attribute that captures users' attention (Ghazali et al., 2018). Essentially, users seek features, services, and easy access to web content (Salameh et al., 2018). The website design is a tangible feature of the products that users are attracted to, which builds confidence for M-Comm website usage (Lee et al., 2018). Meanwhile, reliability is the awareness of the product or service's trustworthiness (Udo et al., 2010). Accurately delivering user expectations builds the product's reliability or services (Huang et al., 2018). Generally, website reliability refers to the web contents (Chi, 2018), whereby reliability reduces the risk towards M-Comm sites (Lee et al., 2018). Responsiveness denotes the readiness

to manage customer complaints (Salameh et al., 2018; Hsu et al., 2017). The response time to address the customer-level grievances to provide support, a solution, and an alternative to the information customers requires (Huang et al., 2018; Nguyen et al., 2018). Customer level trust towards the firms' offerings is observable through the users' willingness to accept the firms' service vulnerabilities, whereby the future service quality improves based on customers' expectations (Leong et al., 2020). The personalisation features appear for the customers to have the individual care, attention, and consideration from service providers (Salameh et al., 2018). From the service provider's perspective, service customization refers to understanding customer needs (Liu et al., 2019). Risk perception is the hazard, threat, or perception of danger during service usage (Salameh et al., 2018). The service quality aspect of M-Comm refers to the money dealing in online shopping using M-Comm (Rita et al., 2019). Perceived cognitive control is the control perception of customer decision-making when using M-Comm services (Chi, 2018). Observably, the perception of cognitive control also impacts the service quality perception (Jay and Zhang, 2016).

Results from earlier studies demonstrate a strong and consistent association between SQ and customer retention. Rahaman *et al.* (2020) in Bangladesh noted this fact. Similarly, Ali *et al.* (2021) in Iraq found that customer retention is the function of SQ. However, ignored tourism industry, This conclusion was congruent with Alketbi *et al.* (2020). In the same vein, Alketbi *et al.* (2020) and Fida *et al.* (2020) found that SQ in terms of empathy and responsiveness dimensions had a significant positive impact on customers' retention in Islamic Banks in the Sultanate of Oman. However, what is not yet clearly known is whether the findings will remain the same upon using a qualitative study instead of a quantitative one. What lacks clarity to date, is whether or not this finding is a true representation of a similar study conducted in the Tanzanian context. Similarly, Han *et al.* (2021) in China biased on public health. This implies that public health services are the potential in satisfying customers. Despite the comprehensive findings, the study ignored other aspects of tourism like accommodation, hotels and transportation. Moreover, this study was conducted in China, instead of Tanzania.

Abdul-Qadiret *al.* (2021) in Nigeria linked the SQ with customer retention of listed food and beverages companies. This implies that customer retention showed the repurchase tendencies. Despite the clarity of findings, yet, this study was not done in Tanzania. Likewise, Gogoi

(2020) noted that service quality affects the customers' satisfaction and loyalty. This implies that loyalty and satisfaction lead to customer retention. Kamna (2021) and Matolo and Salia (2021) dealt with topic based banking sector and Serengeti National Park (SENAPA), hence these studies did not suffice to address the problem at KINAPA.

Similarly, Han *et al.* (2021) in China observed that the service quality of tourism in public health affects customers' satisfaction, loyalty, trust and commitment. This implies that public health services are the potential in satisfying customers, and instill trust and loyalty which are important aspects of customer retention. Despite the comprehensive findings, the study ignored other aspects of tourism like accommodation, hotels, transportation, destination attractions and communication. Moreover, this study was conducted in China, hence, it cannot exhaustively address the situation in Tanzania.

John and Adebayo (2021) investigated the impact of service quality on customer satisfaction in selected hotels in Ibadan in Nigeria. It has been found that service quality dimensions have a positive significant relationship with customer satisfaction. The study concludes that tangible, reliable; responsiveness, assurance, and empathy are good predictors of customer satisfaction with hotel service in Ibadan. However, this study did not relate the service quality with the customers' retention instead is related to the customers' satisfaction. Also, satisfaction was found to have a positive effect on destination loyalty. Furthermore, the findings revealed that satisfaction had a partial mediation effect on the relationship between service quality, destination image and perceived value on the one hand and destination loyalty on the other. It was concluded that the provision of high-quality services increased tourists' loyalty to the park.

Abdul-Qadiret *al.* (2021) in Nigeria linked the service quality with customer retention of listed food and beverages companies in Kaduna State. This implies that customer retention of listed food and beverages companies in Nigeria was satisfied with service quality which derived the repurchase tendencies. Despite the clarity of findings, yet, this study had different research vicinity to the current study and had no link to tourism. Additionally, the study did not focus on the listed food and beverages companies and other sectors.

Likewise, Gogoi (2020) investigated the service quality measures and how it affects customer satisfaction and loyalty in India. It was noted that service quality affects the customers'

satisfaction and loyalty. This implies that loyalty and satisfaction lead to customer retention. However, the study was superficially done in that specific service quality dimensions illustrated how each affects the customers' retention. Nevertheless, this study was not done in Tanzania.

Achieng (2021) studied a related topic in Kenya and the results revealed that there was a significant relationship between service integrity and customer retention in classified hotels in Mombasa County. The study focused on coastal tourism in Mombasa. Although, it was done in East Africa, yet, coastal tourism is different from Mountainous tourism, like KINAPA in Tanzania which is the focus of the current study.

Kamna (2021) in Tanzania found that service quality has no impact on customer satisfaction in the retail banking sector. This study's finding is contrary to other studies and the study focused on the retail banking sector contrary to tourism which is the focus of the current study. Matolo and Salia (2021) revealed that service quality affects the customer loyalty and satisfaction of the Serengeti National Park (SENAPA).

Most of the previous related studies in Tanzania have concentrated measuring service quality in higher education but they have not taken into account to establish the influence of customer retention strategies on customer loyalty. For instance, the study by Mwasongo, Kazungu and Kiwia (2015) measured service quality in higher education but it did not address customer retention strategies. Mashenene (2019) examined the effect of service quality on students' satisfaction in Tanzania higher education but the study was not directly linked with customer retention strategies. Higher education institutions spend a lot of budgets to in marketing activities that include attracting new students, but the majority of these students join other institutions up on completion of one level of the programme instead of proceeding with the same institution. From this view, it was found important to conduct this study. Therefore, the objective of this study was to examine the influence of customer retention strategies on customer loyalty in higher education in Dodoma, Tanzania.

This shows that even though both studies were in the same research vicinities, yet, they generated different findings. Similarly, while SENAPA is a lowland tourism field based on wild animals, KINAPA is mountainous tourism. Thus, a conclusion based on SENAPA cannot suffice to address the KINAPA concerns. Similarly, Ulaya (2017) linked the service quality and customer satisfaction and retention among commercial banks with a focus on Akiba Commercial

Bank (AKB). The study ignored the tourism aspect, in this regard, the findings are not sufficient to address the current study.

Burhan and Kalinga (2018) noted that quality hotel services offered to tourists in Tanzania are associated with satisfaction levels. It was further learnt that tangibility, reliability, responsiveness, assurance and empathy had a positive effect on the customers' satisfaction. However, this study was confined to the hotel services in Tanzania and ignored the specificity of Mount Kilimanjaro tourists.

Methodology

The study analysis is based on primary and secondary data where as a survey design and mixed were adopted congruent to suggestion of Kumar (2019). In this approach, the relationship between independent variable (service quality) the dependent variable (customers' retention) were established. The population of the study was about 172 respondents from KINAPA. This study applied both convenient sampling and purposive sampling techniques to select about one hundred and ten (110) respondents which in other words considered a sample size of the study, computed in accordance with the sample size formula by Cochran (1963) as follows: -

$$n = N / (1 + N e^2) \dots \dots \dots (1)$$

N = finite (known) size of Population = 172

n = sample size

e = sampling error (5%)

$$n = 172 / (1 + 172 \times (0.05)^2) = 120$$

However, 104 out of 120 questionnaire sets were returned by respondents and used in the course of research. With this regard, the sample size of this study became 104 respondents.

Reliability and Validity

Reliability was analyzed using Cronbach's alpha (α) as it predicts the variables. The usefulness of this technique lies in the capacity to ensure internal consistency and group homogeneity (Kumar, 2019). This is given Cronbach's alpha, once you get from 0.7 and above it is considered reliable. The Cronbach alpha has been computed for the purpose of measuring the reliability of the administered questionnaire. This was achieved through the subjection of five questionnaires to randomly to KINAPA. The conclusion reached is that all the variables could be relied upon as the

Cronbach alpha achieved was above 0.7 which is what has been used as the hurdle rate of reliability for the study. The validity of the study refers to the quality and instruments of the study are accurate, correct, truly meaningful and right (Kothari, 2014). To ensure validity, questionnaires were pre-tested by distributing them to statisticians for piloting, their opinions. The validity of the study was measured by the use of Kaiser-Meyer-Olkin (KMO) test which was above 7.

Data Analysis Techniques

Descriptive statistics was used to analyze data and summarize the study results with regard to the respondents' characteristics in form of tables and frequencies. This method was chosen as it displays data the manner which is clearly understood (Kumar, 2019).

Research model setting

The study has set model specification to examine the relationship between service quality and customers' retention at KINAPA based on empirical model specification below:

Research model

In this case, the responses were considered as either high or low retention levels.

$$\Pr(Y = I) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \dots \dots \dots (2)$$

Where, $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are coefficients or constants, X_1 = service tangibility, X_2 = service reliability, X_3 = service responsiveness, X_4 = Service empathy, X_5 = service assurance and ϵ = error.

Findings and Analysis

Descriptive Statistics

The findings show that that 52% of the respondents were male whereas 48% were female. With regard to age findings show that the majority (86.6%) of respondents had the age above 30 years, implying that this age group is comprised of people with a stable income who can afford to undertake tourism. Moreover, findings show that the majority (88.8%) of respondents had a diploma level of education as the minimum education. The findings are in line with Kumar (2019) suggestions.

Overall mean of Customer Retention

The overall mean of the customer retention level is 4.436 as indicated in Table 4.5 below. This implies that majority of respondents agreed that their retention was affected by service quality dimensions.

Variables	N	Mean	Std. Deviation
I have made repeated purchases due to reliable hotel services	104	4.58	1.112
I have visited KINAPA for 7 years due to good treatment	104	4.21	1.334
I severally visit KINAPA because of the attractive wildlife	104	4.60	1.084
I usually purchase at KINAPA due to the responsiveness of employees to customers	104	4.21	1.334
I repeatedly purchase at KINAPA due to dependable meals and accommodation services	104	4.58	1.112
Overall mean		4.436	1.1952

Table 1: Level of Customer Retention at Mount Kilimanjaro (n = 104)

Reliability of Hotel Services

Table 1 shows that the mean of respondents' responses repeated purchases due to reliable hotel services was 4.58 with standard deviation of 1.112. This implies that the majority of respondents held that repeated purchase of KINAPA was attributed to reliable hotel services. This observation is in harmony with the research findings of Gong and Yi (2018) Asian countries are affected. It was revealed that overall SQ had a positive influence on customers' retention.

Good Treatment of Customers

Table 1 shows the mean and standard deviation good treatment is 4.21 and 1.334 respectively. This implies that the majority of respondents were impressed with the good treatment at KINAPA. And were supplemented by the participant who stated that:

“.... I have been repurchasing the service at KINAPA because their services are well offered there is customer service in offering their services a thing that has compelled me to keep on purchasing from KINAPA ”(Interview held with tourist from Australia on 24th June 2021).

Attractiveness of Wildlife

Table 1 shows that the mean and standard deviation based on effect of service attractiveness on customer retention were 4.60 and 1.084 respectively. This implies that the majority of respondents were triggered by attractiveness of wildlife. This observation is in line Rahamanet al. (2020) who contend that SQ correlates with customer retention. To cement the research findings, the FGD participant stated that:

“.... I don't need to ask myself where I will visit next vacation, this is obvious assuredly provision of services with such quality dictates the place to go. KINAPA services have highly impressed me and that is why I am here today...” (Interview held with Jewish tourist on 24th June 2021).

Responsiveness of Employees to Customers Retention

Table 1 shows that the mean and standard deviation were 4.21 and 1.334 respectively. This implies that the majority of respondents were pleased with the responsiveness of employees. This finding is in agreement with the research findings of Rahamanet al. (2020) who emphasized on the role of responsiveness on the customers' retention.

Dependability of Meals and Accommodation Services

Table 1 shows that the mean and standard deviation of were 4.58 and 1.112 respectively in this aspect. This implies that meal and accommodation services affected repurchase at KINAPA. This finding is similar to the observation by Abdul-Qadiret al. (2021) in Nigeria who linked SQ and customer retention.

The Effect of Service Quality Dimensions on Customer Retention

Table 2 of binary logistic regression results shows that the Chi-square was 80.114 at a p -value = 0.000. This indicates that SQ dimensions predict the customers' retention strongly. Cox & Snell R Square and Nagelkerke R Square were 0.537 and 0.847 respectively. This implies that 53.7% and 84.7% of the total variance in customer retention are accounted for by the SQ dimensions. Services tangibles had a coefficient (β) of 2.231 coefficients which was significant. This finding

implies that a unit change of intangibles will result in a 223.1% change in customer retention, furthermore, findings for tangibles show an odds ratio of 2.201 which implies the contribution of tangibles to the customer retention was 2.2 times. This conclusion resembled the findings of Gong and Yi (2018) who obtained similar findings where it was drawn that service quality affected customer satisfaction, retention, and happiness in five Asian countries.

Table 2: Binary Logistic Results

Variables	B-Coefficient	SE	Sig	EXP(B)
Tangibles	2.231	3.350	.000	2.201
Assurance	1.715	1.935	.000	1.004
Responsiveness	2.796	2.969	.000	2.520
Empathy	3.768	3.969	.000	1.301
Reliability	1.715	1.935	.000	2.004
Constant	3.864	.749		
Chi Square		80.114, P= 0.000		
Cox & Snell R ²	.537			
Nagelkerke R Square	.847			

Results from Table 4.6 further show that assurance had a coefficient (β) of 1.715 which was significant. This implies that a unit change in the assurance of services to customers will result in a 17.15% change in customer retention. The odd ratio of 1.004 for assurance in service provision implies that the contribution of assurance to the customers' retention was 1.004 times. The research findings are congruent to the findings of Alketbi *et al.* (2020) who affirmed that service assurance had an impact on customer retention.

With regard to service responsiveness, it shows that the responsive had a coefficient (β) of 2.796 which was significant. This finding implies that a unit change in responsiveness will result in a 279.6% change in customer retention. Furthermore, the odds ratio of 2.52 for responsiveness shows that the contribution of responsiveness to the customers' retention was 2.520 times. The findings are congruent to the findings of Ali *et al.* (2021) who found that service responsiveness had an impact on customer retention. Likewise, findings show that reliability had a coefficient (β)

of 1.715 which was significant. This finding implies that a unit change in reliability will result in a 171.5 % change in customer retention. Furthermore, findings for reliability show an odds ratio of 2.004 which implies that the contribution of reliability to customer retention was 2,004 times. The research results are congruent with observations of Han *et al.* (2021) of China who noted that service reliability had an impact on customer retention.

Similarly, findings show that empathy had a coefficient (β) of 3.768 which was significant. This finding implies that a unit change in empathy will result in a 37.68 % change in customer retention. Furthermore, findings for a responsive show an odds ratio of 1.301 which implies that the contribution of empathy to customer retention was 1.3 times. The research findings are similar to that of Achieng (2021) in Kenya who noted that service empathy had an impact on the customer's satisfaction, loyalty and retention.

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The Paradoxical Effect of “Umbrella Clause” and African States Interference with International Investment Contract and Bits.

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Abstract

One of the safeguards that African countries' investment treaties, including Tanzania, usually provide to international investors and their investments is “The umbrella clause,” which compels the host state of the investment to honor the obligations it has made to the foreign investor or its investment. This might be an extremely effective safeguard. However, the Umbrella clauses, on the other hand, have proven to be one of the most contentious clauses(s) in investment treaties, resulting in contradictory interpretations by tribunals and commentators that have yet to be resolved. Consequently, the conditions of international investment agreements agreed upon with foreign investors have been brazenly ignored, canceled, or altered by African state parties, including Tanzania. The rise in the number of investor-state disputes in Africa before various arbitral tribunals, which point to a widespread lack of compliance with treaty commitments, mostly by African host nations, demonstrates this. Thus, this study explains the concept of the umbrella clause and its interpretations conundrum, as well as provides the reasons for African governmental intervention with BITs and the underlying contracts with foreign investors, whereas reasons such as the Use of Model Treaties, Regulatory Sovereignty, Public Interest, Limitations to resolving disputes through international arbitration, Defenses to State Responsibility, Change in Circumstances, Local content regulations and Nationalization have been discussed in depth.

Keywords: Umbrella clause, African States Interferences, International Investment Contracts, Bilateral Investment Treaties.

Introduction

In order to attract foreign investment, host states make various commitments and representations to foreign investors. Some of these undertakings are embodied in formal bilateral agreements such as investment accords, development contracts, public service concessions, and tax stabilization agreements, to mention only a few. In varying degrees, investors rely on such obligations and undertaking in making decisions about investing their capital in a host country. Thus, Foreign investors and the host state or state-owned enterprises enter into international investment contracts with the goal of regulating specific investment projects in the host state. Mostly this is done by imposing the Umbrella clause in their treaty (Salascuse, 2010). This is among the mechanism which is mostly employed by African states to attract foreign investment. There are various types of international investment contracts as they vary in the form, structure, and model that they take; these include Concession Agreements, Production Sharing Agreements, and Joint Venture Agreements.

Meaning of the Umbrella Clause

An umbrella clause is a provision in an investment protection treaty that guarantees the observance of obligations assumed by the host state vis-à-vis the investor. These clauses are referred to as “umbrella clauses” because they bring contractual and other commitments under the treaty’s protective umbrella. At times they are also referred to as ‘observance of undertaking clauses (K Yannaca-Small, 2010). Traditionally, it has been accepted in international law that a breach of a contract by a state does not give rise to direct international responsibility on the part of that state. However, some recent BITs have included provisions characterized by the International Centre for Settlement of Investment Disputes (ICSID) tribunals as an “umbrella clause, which has often been interpreted as providing blanket protection for foreign investment.

One of the most common formulations of the umbrella clause in investment treaties is, “*Each party shall observe any obligation it may have entered into with regard to investments in its territory by investors of the other contracting Party*”. Also, similar clauses can be found in the BITs, Denmark Mode l BIT under Article 3, Finland Model BIT under Article 12, German Model BIT (No. 201) under Article 8, and US-Argentina BIT 1991 under Article 2.

Currently, the “**Umbrella clause**” has proven to be one of the most contentious clause(s) in investment treaties, resulting in contradictory interpretations by tribunals and commentators that have yet to be resolved. Consequently, the conditions of international investment agreements agreed upon with foreign investors have been brazenly ignored, canceled, or altered by African state parties. The rise in the number of investor-state disputes in Africa before various arbitral tribunals, which point to a widespread lack of compliance with treaty commitments, mostly by African host nations, demonstrates this. Thus, this study explains the reasons for the interference as an impact of contradictory interpretations of the umbrella clause.

Methodology

This study is a normative legal study; it reviews some of the pieces of literature to gather the necessary information concerning the concept of the “Umbrella clause” by utilizing normative methods. Secondary data consisting of primary such as case laws, and legal instruments are gathered and utilized in this study. Different African BITs have been taken into consideration and the decision of the International Centre for Settlement of Investment Disputes (ICSID) tribunals have been much considered because most of the recent BITs have included provisions characterized by the International Centre for Settlement of Investment Disputes (ICSID) tribunals.

The Paradox interpretations of the Umbrella clause

The appropriate formulation of the so-called "umbrella clause," a provision contained in many BITs that requires each Contracting State to follow all investment obligations entered into with investors from the other Contracting State, is one of the most contentious issues that has emerged in arbitration. The differing interpretations of apparently similar umbrella clauses by different tribunals raise concerns with respect to the consistency and development of the law of investment treaties. Part of the reason for the divergence in the arbitral decision is certainly due, to some extent, to the divergent formulations of the clause that tribunals have been confronted with in individual cases. The following are different interpretations of umbrella clauses by the tribunals.

SGS v Pakistan Interpretation (narrow interpretation)

In *SGS v. Pakistan*, a Swiss corporation agreed to offer a "pre-shipment inspection" to the Republic of Pakistan in 1994. Pakistan, however, grew disappointed with SGS's performance after a few years and canceled the contract. It was alleged that Pakistan's conduct under the PSI Agreement violated its obligations under the Switzerland-Pakistan BIT. The Tribunal interpreted and observed that, an Umbrella Clause does not raise a host state's non-treaty responsibilities to a treaty obligation established in the BIT. As a result, an investor cannot rely on an Umbrella Clause to bring a treaty claim against a host state-based simply on the latter's purported non-treaty commitment. Despite the fact that the panel in *El Paso v. Argentina* deemed this interpretation "more than conclusive," Also, the tribunal provided a position that the effect of umbrella clauses is ultimately limited to contractual violations committed by the host state while exercising sovereign power. The position of this decision was reiterated later in the case of *Toto Construzioni v Lebanon*, *Salini v Jorda*, *Siemens v Argentina*, and *Joy Mining v Egypt*.

SGS v Philippines Interpretation (No Internationalisation)

Six months later, in *SGS v. Philippines*, an ICSID Tribunal reached a different decision in interpreting the umbrella clause in the Switzerland-Philippines BIT. The panel disagreed with **SGS v. Pakistan** in that an Umbrella Clause brings a state's commitments to a specific investment within the treaty framework since they constitute enforceable duties under the applicable municipal law. Furthermore, the tribunal stressed that it did not raise a non-treaty duty to a treaty obligation since the Umbrella Clause does not change the fact that the commitment at issue is still controlled by local law. As a result, the tribunal saw the Umbrella Clause as a *ratione materiae* enlargement of its jurisdiction, allowing it to hear claims based on the host state's alleged infringement of non-treaty duties under the applicable municipal law. Contractual obligations, on the other hand, were subject to an exclusive forum selection clause in the contract in question. A similar approach was espoused by the tribunal in *Bosh v Ukraine*, and *BIVAC v Paraguay*.

SGS v Paraguay Interpretation (Full internationalisation)

In this case, the Tribunal stated that the Umbrella Clause lifts a host state's non-treaty commitment to the level of a treaty obligation, placing it under the *ratione materiae* jurisdiction of an investment treaty arbitral tribunal. Following the SGS instances, a number of international arbitration rulings have addressed the umbrella clause, but not necessarily to the same extent. These rulings, taken together, develop a larger and more encompassing interpretation of the umbrella clause and are, therefore closer to *SGS v. Philippines* than *SGS v. Pakistan* in that regard. For example, In *Eureko v. Poland*, the tribunal found that the respondent state's breach of commercial duties might be considered a treaty breach since it violates its treaty responsibility to honor whatever obligations it may have engaged into with relation to the claimant's investments. In *Noble Ventures v. Romania* provided a clearer reinforcement of this view, concluding that "[a]n umbrella clause is typically interpreted as changing municipal law responsibilities into obligations immediately cognizable in international law." A similar position was reiterated in the case of *Burlington v Ecuador*, and *Duke Energy v Ecuador*.

Henceforth, following the differing verdicts in the two SGS instances, a two-fold question has arisen in the umbrella clause debate: *Firstly*, whether breaches of Investor-State contracts can amount also BIT violations under the umbrella clause, and *secondly* is whether the BIT tribunal can exercise jurisdiction over claims for contract breaches despite any exclusive forum selection clause in the contract designating a different forum for the resolution of disputes. Due to these divergences, and adverse interpretation of umbrella clauses against African state, most of the African BITs was modified by the host states.

The African States and Application of the Umbrella Clause

One of the safeguards that African countries' investment treaties usually provide to international investors and their investments is "The umbrella clause". Recently, most African states' BITs have incorporated umbrella clauses so as to attract foreign investors. For example, twelve of South Africa's BITs contain an umbrella clause formulation obliging the contracting parties to observe 'any obligation' or 'any other obligation' that they may have entered into with regard to investments of foreign investors. This can be evidenced in the Iran-Republic of South Africa BIT, which obliges each State to 'guarantee the observance of the commitments it has entered

into with foreign investors. Furthermore, Tanzania presently has a total of ten bilateral trade agreements in place, including ones with Canada, China, Denmark, Germany, and the United Kingdom. Most BITs contain clauses that oblige the host state to observe its commitments to investors (an umbrella clause). The umbrella clause is witnessed in different BITs concluded with the following countries: Libya (2002), Algeria (1991), Burkina Faso (2001), Comoros (2001), United Republic of Tanzania (1999), United Republic of Tanzania (2001), Nigeria (2000), Egypt (1996), Zambia (2003); Zimbabwe (1996), Gambia (1993); Ghana (1991), Uganda (1998).

State Responsibility and Internationalization

State responsibility is engaged whenever a state breaches an international obligation by which it is bound (Article 2, ILC, Draft Article on Responsibility of States for Internally Wrongful Acts, with Commentaries' (2001). International law governs the characterization of the breach as internationally wrongful (Article 3, ILC, Draft Article on Responsibility of States for Internally Wrongful Acts, with Commentaries' (2001). As investment contracts do not usually generate international obligations, a breach of contract usually does not, in itself, violate international law. Concern over the vulnerability of investment contracts to unfavorable changes in host state laws motivated some scholars to theorize that these contracts may nonetheless be removed from the influence of national law and relocated within the protective ambit of international law². Hence, the conversion of contractual obligations to international obligations is known as "Internationalization". This indicates that these contracts are controlled by customary international law, rather than the state party's local laws (UNCTAD, 2004).

Thus, a contract between a state party and a foreign investor is usually controlled by the state party's municipal laws. This position was emphasized by the Permanent Court of International Justice in the *Serbian Loans case (1929) PCIJ Rep Series A No 20, 41* stated that "any contract which is not a contract between States in their capacity as subjects of international law is based on the domestic law of some country". The contract, however, is withdrawn from the realm of the state party's municipal laws and submitted to a supranational system of international law in order to preserve the contractual rights and other economic interests of the foreign investor.

² F.A.Mann, (1959) The Proper Law of Contracts Concluded by International Persons' 35 BYIL 34 at 46; W. Friedmann, (1964) Half a Century of International Law' 50(8) Virginia Law Review 1333 at 1340 and 1342-3

Concerns about the impartiality of local courts and the exercise of state sovereignty in the case of a disagreement between the state party and the foreign investor are the key reasons for the internationalization of these contracts. Therefore, the contracts being placed under international law, gain stability which is important to foreign investors, because they are no longer subject to the legislative control and power of the state party, which would allow it to amend the contract at will.

However, it is a widely held belief that a state party's breach of an international investment treaty does not always imply a violation of international law or a breach of the relevant BIT. To constitute a breach under international law, a state party must have acted in the exercise of its sovereign authority in order to directly interfere with or terminate the contract, resulting in either a denial of justice, cancellation of licenses, expropriation without adequate compensation, violation of due process, or a breach of such other treaty norms as fair and equitable treatment (Johnson.L & Volkov.O, 2013).

Concept Of State Interference

Interference with international investment contracts by the State usually takes the form of an executive order or legislation that modifies the government's performance requirements under a contract, cancels the contract altogether, or has a negative impact on the contract's performance or expected profits. Expropriation of foreign investors' properties without adequate compensation, violation of due process, or a breach of substantive treaty provisions such as the Most Favoured Nation (MFN) principle or Fair and Equitable Treatment (FET) are all examples of how a state party can interfere with an international investment contract.

It should also be noted that if a state party takes measures, such as changing the law of general applicability, that have the effect of interfering with a foreign investor's rights under a contract with that state, but such a measure was taken for a public purpose, the state party will not be held liable under international law unless other circumstances exist, such as an abuse of the law, a lack of due process, or discriminatory intent.

African States' Interference and Non-Compliance With Bits.

In the absence of an international treaty on the regulation or protection of foreign investment, many states have concluded Bilateral Investment Treaties or other International investment agreements with a view to attracting foreign investment by according these investors an additional layer of protection (Subed, S.P. 2016). A BIT is a principal mechanism for regulating and governing foreign investments since it establishes certain rules and standards that apply to foreign investments. These rules cover both the criteria for protecting foreign investments and the appropriate procedures in the event of a disagreement between the contractual parties. BITs provide significant protections to foreign investments through various features which include National Treatment Obligations (Article 2 (2) (c) of the Charter of Economic Rights and Duties of States), Most Favoured Nation Treatment Obligation (the case of *Morris v. Uruguay*, the foreign investor invoked the most favoured nation obligation in the treaty by proceeding directly to arbitration since other BITs which had been entered into by Uruguay with other states allowed for dispute resolution through arbitration in first instance), Fair and Equitable Treatment (see *Metalclad v. Mexico* (ICSID Case No. ARB (AF)/97/1), *Tecnicas Medioambientales Tecmed S.A. v. The United Mexican State* (ICSID Case No. ARB (AF)/00/2), *Tecmed v. Mexico* (ICSID Case No. ARB (AF)/00/2), *Repatriation of Profits, Nationalization, and Compensation* (See *Antoine Goetz v. Republic of Burundi* (ICSID Case No. ARB/95/3), and *Dispute Settlement*. BITs are thus viewed as a means of encouraging investment between signing nations due to the protection and security provided by the treaty by establishing minimum standards of investment protection and offering international arbitration to address disputes.

A host state's signature on bilateral investment treaties ensures international investors that the host state is dedicated to the promotion and protection of foreign investments. However, the fact is that not all countries adhere to the requirements of the treaties they have signed specifically to the African States. It is well known that most investor-state disputes are arbitrated under the auspices of ICSID. Over the years, the number of investor-state disputes heard and decided by ICSID arbitration courts has risen dramatically. As of December 31, 2021, ICSID had registered 869 cases under the ICSID Convention and Additional Facility Rules, whereas 15% of cases involved state parties from Sub-Saharan Africa. (ICSID CASELOAD, 2022) Hence, CSID acts

as a key reference point for the nature of these disputes and the degree of the host state's non-compliance with treaty commitments.

Reasons For African States' Interference and Non-Compliance With Bits

Non-compliance with treaty commitments has occurred for a variety of reasons that necessitate a thorough investigation. The following are some of the reasons for the African state to interfere with international investment agreements and BITs.

Use of Model Treaties

Capital-exporting home states, usually Western nations, start and push the completion of BITs. This is due to the necessity of safeguarding their citizens' overseas investments. The accords are primarily based on model treaties made earlier by Western countries. They include provisions that capital-exporting countries believe are necessary to protect foreign investments without providing the obligations of the foreign investor. The adoption of model treaties offered capital-exporting governments a negotiating edge because it is their instrument that served as the basis for negotiations. As a result, the host state negotiates the treaties from a position of weakness. Normally, substantive amendments to these model treaties are discouraged by the capital-exporting states. For instance, The Department of Trade and Industry conducted a review of South Africa's BITs in 2009 and discovered that no policy framework guided the conclusion of the agreements and that they were negotiated blindly without an individualized assessment of the risks and benefits associated with negotiating an investment agreement with a specific partner. It was revealed that the treaties they had signed were substantially slanted in favor of the home states. Investor duties were not specified in the treaties. Furthermore, the accords were silent on human rights and environmental issues (Government Position Paper, 2009). Hence, the host states lacked a true commitment to comply with the treaty's obligations due to their lack of participation in the treaty's development. In this context, the CCIA and SADC Model Treaty, as promoted by a number of Sub-Saharan African nations, aspires to establish a balanced investment agreement regime that is not tilted in favor of international investors, as was the case with the Western Countries' Model BITs (Ofodile. U.E, 2014).

Regulatory Sovereignty

The host governments are believed to have relinquished their regulatory sovereignty by signing the BITs. This is due to the fact that the investor-state contractual arrangements become internationalized as a result of the treaties entered. Hence, the treaty superseded local legislation when it came to dealing with foreign investments. Moreover, the inclusion of public law and administrative rights such as licenses and permits in the scope of investments to be safeguarded by the BITs limits the host state's regulatory authorities even more. Thus, the African host states want a return to regulatory control over the economy, which included international investment. For instance, in the case of *African Petroleum Gambia Limited (Block A4) v Republic of the Gambia* and *African Petroleum Gambia Limited (Block A1) v Republic of the Gambia*, these contentions stemmed from Gambia's termination of two offshore oil licenses held by an Australian IOC, claiming that the licenses were in violation of the country's national petroleum legislation.

Hence, both the CCIA and SADC Model BIT seek to preserve domestic regulatory space through the use of exception clauses. For instance, Article 22 (1) of CCIA provides that nothing in the agreement shall be construed to prevent the adoption or enforcement by any state party of measures designed and applied *to protect national security, public morals, human, animal or plant life or health, the environment* or any other measures as may from time to time be determined by a state party (See Japan–Morocco BIT; Burkina Faso–Turkey BIT; Cape Verde–Hungary BIT; and Burundi–Turkey BIT⁹). Similarly, the 2019 Hungary–Cape Verde BIT has similar provisions established that “The provisions of the Agreement shall not affect the right of the Parties to regulate within their territories through measures necessary to achieve legitimate policy objectives, such as the protection of public health, safety, environment or public morals, social or consumer protection or promotion and protection of cultural diversity”.

Change in Circumstances

Most of the BITs were entered into between the home and host states shortly after the African States got independence. Africa's post-independence development needs were distinct from those of the rest of the world. With the passage of time, these accords no longer reflected the present

developmental and investment requirements and concerns of developing host nations. Hence, the need to amend the BITs is indispensable.

Public Interest

For the benefit of the public interest or public policy, some state parties alter or even terminate contracts with foreign investors, subject solely to the obligation to pay compensation. The reasoning is that a state party is regarded to enter into an international investment treaty on behalf of its nationals, therefore representing their collective interests. As a result, when a major change in circumstances occurs to the point that the international investment treaty is no longer advantageous to the public, the state party may be justified in amending or terminating the treaty, subject to adequate compensation. Furthermore, according to the concept of *rebus sic stantibus*, a treaty is only valuable as it is, a change in circumstances that is adverse to the public interest may be regarded as a justifiable justification for a state party to alter or cancel an international investment agreement (Leeds, B.A & Sayun, B 2007).

Nationalism

State parties see their resources, particularly in the energy sector, as sovereign resources and important to economic growth because of the customary international law stance on perpetual sovereignty over natural resources. This is why many arbitrations involving the African energy sector occur as a result of state parties nationalizing energy resources, triggering investment treaty claims (Finizio S.P, 2018). This was the situation in Zimbabwe when white-owned businesses were nationalized, and white people were expelled from their farms and homes.

Local content regulations

Several African countries have altered their energy legislation, regulations, and bidding methods to incorporate 'local content' criteria, and are progressively demanding international investors to follow these rules (Finizio S.P, 2018). These local content regulations may, among other things, establish a minimum threshold for the use of local services and materials, require that local companies be given preference, promote the transfer of skills from foreign investors to the local workforce, provide local employment for foreign investors, ensure local participation in bidding rounds, and prioritizes local suppliers (Abade A.A, 2016). For example, Tanzania, Nigeria,

Kenya, Ghana, Mozambique, and Angola have all formalized local content restrictions as part of their national petroleum laws.

Defenses to State Responsibility

Several defenses to state responsibility have emerged as a result of the treaty's implementation. State parties utilize and rely on defenses in order to justify their violations of the treaties. These defenses are intended to provide the state party with a way out of obligation. Examples of the defenses to state responsibility include national security. As state parties want to protect their regulatory jurisdiction over foreign investments, the defenses against state culpability are founded on customary international law. Moreover, these defenses have also attempted to address some of the concerns expressed by underdeveloped countries. Human rights violations and environmental destruction, which are occasionally perpetrated by foreign investors, are among these concerns. As a result, it is thought that a host state would be justified in withdrawing investment protection if a foreign investor is complicit in reducing human rights and environmental norms.

Therefore, an investment that poses a national security risk might be refused protection under the treaty. This is especially when the investors are from a hostile country, and the investments are in sensitive areas like arms.

The foreign investor's violation of the fair and equitable norm is still another defense against state culpability under the treaty. This is based on the equitable principle, which states that a person who comes to equity with clean hands must do so. The host state may use this as a justification for breaking the treaty if the foreign investor is determined to be at fault. This is especially often when a foreign investor is proven to be responsible for human rights violations or environmental destruction.

Limitations to resolving disputes through international arbitration

This is one of the causes that has lately surfaced. Some African countries have decided that restricting their assent to international arbitration will best serve their interests in attracting foreign investment while also achieving other public goals (The 2012 Cameroon–Turkey BIT it excludes disputes arising out of investments that represent less than 10 per cent of a company,

investment activities which have not acquired necessary approvals; and investments concerning real estate rights from the scope of international arbitral review). South Africa, for example, has canceled several of its Bilateral Investment Treaties and implemented the Protection of Investment Act of 2015, which prohibits investor-state arbitration. Rather, disagreements between investors and South Africa are settled through mediation or through the usual channels of national courts and administrative agencies. South Africa may accede to international arbitration under the Protection of Investment Act, subject to the exhaustion of domestic remedies, but such arbitration is conducted between South Africa and the appropriate investor's home state, rather than directly with the investor (Investment Promotion and Protection Bill (2015), Act No 22 of 2015, Official Gazette, No 39514). Moreover, the investment agreement adopted by the Common Market for Eastern and Southern Africa (COMESA) requires that prior to having the right to resolve their disputes through international arbitration, investors must exhaust local remedies and attempt to resolve their disputes with host countries through mediation. Other BITs are Morocco–Nigeria BIT (2016); China–Côte d'Ivoire (2002); Cameroon–Turkey; Egypt–Switzerland BIT (2010)

Conclusion, Implications and The Area for Further Research

Since the 1950s, investment agreements have included the umbrella clause. Although not always present, it has always been a component of bilateral investment treaties. It had previously only attracted the attention of experts and scholars, who, for the most part, saw it as a provision lifting contractual responsibilities to the status of treaty commitments. Before the tribunals arbitrating the *SGS v. Pakistan* and *Philippines case*, no arbitral tribunal had previously given the matter any thought. Since then, it has generated much debate among academics and arbitral tribunals. Following the *SGS v. Pakistan* Decision on Jurisdiction, the Swiss authorities' interpretation of the clause is the only one from a State that expresses the intention of the State that includes the clause in its treaties at the time of inclusion, which in this case is to subject contractual commitments to treaty disciplines. Thus, the umbrella clause is written differently in other investment agreements. Due to this variation, the correct interpretation of the provision depends on the individual treaty's wording, its usual meaning, context, the goal and purpose of the treaty, as well as the history of the negotiations or other cues that point to the parties' intentions. Thus, there is a need for the African State to consider the application of umbrella in African context.

Despite the rise in the number of BITs in Africa, their credibility in enforcing contractual commitments intended at encouraging and safeguarding foreign investments has eroded. The rise in the number of investor-state dispute arbitrations at ICSID, which indicate a rise in state party violations of contractual commitments, can demonstrate this. However, the grounds for state intervention in international investment contracts, as described above, may be linked to the state parties' and foreign investors' respective public and private sector interests. State parties can abrogate the conditions of the BITs and the underlying international investment treaties because of the divergent interests of the public and private sectors. Interference by African state parties in international investment treaties reveals a widespread lack of compliance by state parties with the underlying BIT responsibilities between contractual state parties. As a result, the treaties' previously promised assurance of investment protection under the Umbrella clause has been put into question. Furthermore, jurisprudential analysis under the modern day BITs need to be examined. For example, current the tribunal encounters a different issue on whether the umbrella clause can be invoked by the parties to the contract, or whether the ambit of such clause is wide enough to cover entities, holding and subsidiary companies or the shareholders of the parties to the BITs?

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Effects Of Corporate Governance Disclosure On Profitability Of Public Listed Firms In Tanzania

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Abstract

This study investigated the effect of corporate governance information (CGI) disclosure on profitability of firms listed in the Dar es Salaam Stock Exchange (DSE). 21 listed companies were studied for a period ranging from 2006 to 2021 using a mixed research method with an explanatory sequential design. Secondary data was obtained from DSE. Qualitative data was gathered via semi-structured interviews. Thematic analysis and a random effect model with two estimates (1 and 2) were utilized to analyze qualitative and quantitative data respectively. The findings suggested that there was a positive and significant effect of CGI disclosure on firm profitability. The findings add to the body of knowledge by signifying stakeholder's theory. The study concluded that Disclosure of CGI may undeniably result in increased profitability. We recommended that firm managers should pay a closer look at CGI disclosure, enhance their disclosure practices, and invest in disclosure strategies that will benefit stakeholders.

Key words: corporate governance information disclosure, firm profitability, ROA, ROE, listed firms.

JEL Classification: G39

Introduction

The accumulation of invaluable lessons from a string of business failures that occurred in different parts of the world gave rise to the continued relevance of corporate governance in a variety of countries and regions around the globe (UNCTAD, 2007). Due to the continued worldwide importance of corporate governance, listed companies have been subjected to a great

amount of pressure in recent decades to disclose Corporate Governance Information (CGI) (Nobanee & Ellili, 2022). CGI disclosure provide additional information to stakeholders and eliminate information gap between insiders and investors which is caused by managers' dominance for information access and control (Nurfitriana & Yadiati, 2018). The annual report is regarded as one of the main channel of information sharing through which management may disclose CGI (Esther & Henry, 2018).

Even though annual financial reports might present a brighter financial future for the firm, there exist non-financial issues which causes big firms to fail (Ooghe & De Prijcker, 2008). Such failures spurred governments all around the world to seriously probe alternative methods to improve their particular countries' corporate governance frameworks (Roszaini & Mohammad, 2006). Different countries have distinct national traits as well as social and economic priorities (Joshi, 2021). What is acceptable in one nation may not be desirable in another (Ibiam & Nwogo, 2017). Similarly, each firm has its own history, culture, and commercial objectives (Vieira, 2015). As a result, corporate governance cannot be static; there is a chance for it to vary unpredictably among countries and enterprises as it is driven by Internal as well as external environmental dynamism (Joseph & Tranos, 2018). Ultimately any effect on corporate governance might end up affecting firm profitability.

Profitability is the ability of a firm to generate more money than it spends. The majority of a firm's earnings comes from its operational activities. There will be no profit if the company is not operating efficiently and effectively (Oluwaseyi, Christopher, & Akinlabi, 2021). Profit and profitability are distinct concepts. Profit is an absolute monetary unit, but profitability is a relative measure of how efficiently and effectively a company uses its resources to generate such profit as a whole. ROA and ROE are two of the most often used metrics of profitability, they assess profit relative to the resources used to achieve that profit (Francis & Holmes, 2020). Since profitability largely depend on a firm's operational efficiency and effectiveness then it is more likely for it to be influenced by corporate governance (Hakimah, Pratama, Fitri, Ganatri, & Sulbahrie, 2019). This mainly stems from the fact that individuals who are charged with governance have the right and duty to control and direct entire firm's operations (Iqbal & Kakakhel, 2016). Bestowing of rights and duty to control firm's resources gave rise to the need for CGI disclosure.

The disclosure of CGI is guided by the global reporting initiative standard no 102 – governance disclosure. GRI standards offer firms with a flexible and future-proof reporting framework as processes and themes of CGI are always up to date and relevant when a firm employs the GRI standards (Strozzilaan, 2020). However, the presence of standards doesn't negate the fact they might be interpreted and implemented differently based on cultural, economic and business variations across nations (Ghasarma, Putri, & Adam, 2017). Due to variations in interpretations and implementation of standards we argue that it is possible for the effect of corporate governance disclosure on profitability of businesses to vary across the globe.

Researchers across the globe have probed into establishing the effect of corporate governance on firm profitability. (Harisa, Adam, & Meutia, 2019) concluded that the quality of CGI disclosure does not affect the profitability of Indonesian and Malaysian Islamic banks, they further narrated that companies found it difficult to grasp the benefits of CGI disclosure and felt that it is an activity that simply strain the firm's finances and believed that CGI transparency is not lucrative for the firm. Buallay (2017) revealed that there was no direct effect of corporate governance on firm profitability in Saudi Arabia as firms with low implementation of corporate governance had higher operational performance measures (ROA and ROE). Panchasara & Bharadia (2013) results showed that the profitability of Indian banks proxied by ROA was greatly impacted by the financial and non-financial disclosures of Corporate Governance. Kaur & Vij (2017) established that the Return on Assets and Return on Equity of Nairobi Securities Exchange (NSE) Companies were positively affected by CGI disclosure.

In African context Lishenga & Mbaka (2008) concluded that better corporate governance disclosure does not significantly affect profitability of Kenyan firms, as there was an inability to establish a significant relationship between compliance with CGI disclosure and ROA and ROE. Study done by (Adefemi, Hassan, & Fletcher, 2018) also failed to establish any significant effect of CGI disclosure on profitability of Nigerian firms. Herbert & Agwor (2021) determined that the corporate governance disclosure of board of directors by Nigerian banks had a considerable positive effect on ROA, but it had no meaningful effect on ROE.

Various studies in Tanzania have looked at the relationship between corporate governance and firm profitability. Masasi (2020) found that corporate governance had a positive effects on banks' ROA and ROE. Assenga, Aly, & Hussainey (2018) determined that ROA and ROE of

Tanzanian listed firms were negatively affected with CEO dualism, but are positively affected by board size, and board gender diversity. Matemu, (2020) found that corporate governance had a positive impact ROA and ROE of financial institutions registered in DSE. The results indicate there is a contradiction on the different aspects of corporate governance effects on firms' profitability. Apart from the contradiction the researchers considered only certain aspects of corporate governance and not in its all entirety as is required to be disclosed by the standards. Masasi (2020) focused on controls and board independence and composition, Assenga et al, (2018) focused on board's characteristics and Matemu, (2020) focused on board size, composition and characteristics. A glimpse view offered by other researchers in Tanzania necessitates the need for studying further the effect of corporate governance disclosure on firm profitability by considering all the aspects of CGI disclosure.

In a perfect world CGI disclosures increase the firm's operational transparency and bolster its credibility among stakeholders (Clement & Isaac, 2022). However Harbaugh & To (2020) argue that disclosure of information might sometimes backfire on the issuer. Too much information disclosure might expose the firm strategic competitive advantage and thus creates an urge to not disclose all the information (Young et al., 2019). Apart from that, nondisclosure might bring an equilibrium once the information standards are low or if previous expectations were positive. Hence full disclosure of information is a viable option if standards of information are high enough or expectations are low enough. From such perspective we argue that CGI disclosure might either have a positive or negative effect. Mixed effects present a problem as some firms might be reluctant to fully disclose CGI due to the information being of low standards and hence detrimental while others will go all out to disclose CGI. In presence of such problem, we sought to establish the effect of CGI disclosure on profitability of listed firms in Tanzania.

In addition to the above stated problems there are also variations in interpretations and implementation of GRI standards caused by cultural, economic and business environment differences. Presence of conclusion dilemma among researchers and focus of Tanzanian researchers on board compositions and characteristics when assessing the effect of corporate governance on firm's profitability creates a gap in literature. Thus, the primary objective of this particular research is to fill in that gap by investigating as to whether CGI disclosure has an effect on the profitability of Tanzania's publicly listed firms. Within the scope of our study, we

looked at firms that were traded on the Dar es Salaam Stock Exchange between the years 2006 and 2021.

Hypothesis formulation

Consequently, the hypothesis on which this study is based states;

H₁; Corporate governance disclosure has a positive effect on firms' profitability

Theoretical base

Stakeholder theory

Stakeholders' theory was put forth by Edward Freeman (1984) it states that the firm's effectiveness is measured by its ability to satisfy its stakeholders. firms' stakeholders are all the parties impacted by its operations and the firms existence in the long run is based on their satisfaction (Muis, Syam, & Priantana, 2022). Stakeholders are such as customers, workers, suppliers, political action organizations, environmental groups, local communities, the media, financial institutions, governmental bodies, and more (Rintamäki, 2018). This concept portrays the firm's environment as a biosphere of connected groups that must be satisfied to maintain the firm's health and profitability (Simon, 2016). This demonstrates that stakeholders have a vested interest in ensuring that the resources are exploited to the fullest extent of their potential, which should ultimately be to the advantage of society as a whole (Mottis, 2019). Effective corporate governance is one of the key ingredients in satisfying the vested interests of the stakeholders as it is the management that overlooks the optimal exploitation of firms' resources for the benefits of all the concerned parties. From that vantage point this study will put the stakeholders' theory to the test by determining if the disclosure of CGI has any effect on firm profitability.

Research Methodology.

Mixed explanatory sequential research design was used in the study to give a larger and more comprehensive view of the paper and to explain initial quantitative findings (Almeida, 2018). With this approach it is easy to draw powerful and meaningful conclusions due to collaboration of the design's strong numeric emphasis and relevant qualitative explanations (Almeida, 2018).

Sample and data

21 firms listed in the Dar es Salaam stock exchange (DSE) made up the Sampling Population. The study used the census approach as all the firms in the DSE were studied financial years 2006 to 2021 were included in the study's time frame. Panel data on the dependent variable firm profitability (ROA, ROE), independent variables CGID, and control variables (firm size, firm age, geographical diversification and sales growth) were obtained from audited annual reports of firms listed on the DSE. The research used panel data for the time period extending from 2006 to 2021. The choice to use panel data was based on its capability to offer reduced collinearity while also providing for greater information (Barthelemy, 2017). 2006 is also the year from which data began to be available in electrical format from the DSE. The Tanzania Company Ordinance 2002 also went into effect in 2006, and most of the listed companies began complying with the Ordinance's criteria and IFRSs in compiling their financial reports in the same year after it was institutionalized in 2004. As a result, this research opted to begin its investigation in 2006.

Interviews with a semi-structured format were carried out so the results of quantitative research could be supported. Twelve key informants were interviewed for the study. One broker, four regulators from CMSA and DSE and Seven senior executives from various firms were chosen as key informants. Respondents were chosen due to their knowledge of internal dealings and governance of DSE firms and the tenure they have served in their organizations. use of interview with other research methods provides a significant source of greater insights from the viewpoints of many persons who have a grasp of the internal affairs, procedures, and interactions of the organizations analyzed in this study (Maia, 2021).

Analytical model

Regression model was employed to establish the effect of CGI disclosure on firms' profitability. Other researchers such as (Kaur & Vij, 2017; Panchasara & Bharadia, 2013) have also used the similar model to determine the effect of CGI disclosure on firms' profitability. Appropriateness of the regression model stemmed from the continuous nature of the dependent variable. Equation (i) and (ii) presents the models

$$ROA_{it} = \beta_0 + \beta_1 CGID_{it} + \beta_2 FS_{it} + \beta_3 FA_{it} + \beta_4 Geog\ diver_{it} + \beta_5 Salgrowth_{it} + FD_i + TD_t + e_{it}$$

..... (1)

$$ROE_{it} = \beta_0 + \beta_1 CGID_{it} + \beta_2 FS_{it} + \beta_3 FA_{it} + \beta_4 Geog\ diver_{it} + \beta_5 Salgrowth_{it} FD_i + TD_t + e_{it} \dots\dots\dots (2)$$

Where: ROA and ROE are dependent variables, β_0 is constant, β_1 to β_5 were the estimates which included independent variables Corporate Governance Information Disclosure (CGID), Firms size (FS), Firm Age (FA), Geographical diversification (Geog diver) and Sales growth (Sal growth) while vectors FD (Firm Dummy) represented firms time invariant specific effect and TD (Time Dummy) represented time variant specific effect, e is the error term and i and t are firm and time elements respectively

ROA was chosen because of its ability as a tool to relate profits against operational efficiency. It measures a firm's long-term financial viability by considering its use of existing assets to generate profits (Strouhal *et al.*, 2018)(Strouhal et al., 2018) . Under corporate governance ROA is a good measure of the agents' utilization of available assets to generate profits for the principal. The value of ROA was determined using the formula presented in equation (3)

$$ROA = \frac{\text{Profit before tax}}{\text{Total assets}} \dots\dots\dots (3)$$

ROE was used due to its ability to measure profit by focusing on profitability for shareholders (Albuja, Garcia, Moreiras, & Tambosi Filho, 2011) in this study shareholders are a group of interest since they are amongst the stakeholder as presented by the stakeholders theory. ROE was determined using the formula presented in equations (4)

$$ROE = \frac{\text{Profit after tax}}{\text{shareholders' equity}} \dots\dots\dots (4)$$

Lishenga & Mbaka (2008) and Buallay (2017) among others are examples of researchers who employed ROA and ROE as a performance measurement tool when assessing the effects of CGID on firms' profitability.

Before beginning the data analysis process, the researcher made sure that the data satisfied all of the requirements for regression assumptions and then moved on to the next step. After

conducting a Hausman specification it was determined that random effects were likely to be more consistent and efficient.

Computation of Corporate Governance information disclosure (CGID) Index

In order to construct the corporate governance disclosure index, we used information extracted from the annual reports of the firms whose corporate governance disclosures were under scrutiny. The index was constructed based on a dichotomous scale in which an item that was disclosed was marked as 1 and the item of that was undisclosed was marked as 0. As the regulations requires a disclosure of 40 items related to corporate governance then the disclosure index was calculated as

$$CGID = \frac{\text{Total score of the company}}{\text{Maximum score obtainable by the company as per regulations (40)}} \times 100$$

The CGID value varied from 0 to 100, with 0 being the worst disclosure and 100 representing the greatest possible disclosure by a firm. Similar approach of measuring CGI information disclosure was adopted by (Kaur & Vij, 2017 ; Wendy *et al.*, 2020).

Variables measurement are presented in table 1

Table 1: Variables Measurement

Variables	Measurement	Expected Sign
Dependent Variable		
Return on Asset	Net profit before tax divided by total assets.	+/-
Return on Equity	Net profit after tax divided by shareholders' equity	+/-
Independent variable		
CGI disclosure	It is dichotomous i.e., 1 for disclosure and 0 if otherwise	+
Control variables		
Firm size	Natural logarithm of the total assets	+/-

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Geographical diversification	Dichotomous i.e., 1 for diversification and 0 for otherwise	+
Firm age	Number of years since incorporated till the period of study	+/-
Sales growth	Current year's sales minus previous year's sales over the results of previous year's sales	+/-

Note that: + = positive and – = negative

Source; author

Results and discussion

Descriptive Statistics Linking CGI Disclosure and Firm Profitability

Effects of CGI disclosure on firm profitability was examined in this research. Descriptive statistics are presented in Table 2 to give an overview of the mean, minimum, maximum and standard deviations of ROA, ROE, firm size, firm age, sales growth and geographical diversification.

Table 2: Descriptive results for Dependent and Independent Variables

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
ROA	265	12.377	25.214	-163.772	69.260	-0.739	2.603
ROE	265	14.237	24.304	-143.832	62.460	-0.238	1.401
CGI	265	0.680	0.107	0.475	0.875	0.497	2.406
FA	265	23.568	17.160	0	69	0.990	2.224
Geog diver	265	0.619	0.385	0	1	-0.660	2.657
FS	265	7.696	1.105	4.674	10.138	-0.219	2.284
Sal growth	265	0.826	8.848	-0.899	97.525	0.439	2.310

Source; author analysis

Table 2 shows that the average ROA was 12.38%, with a minimum loss of 163.7% and a maximum profit of 69.26%. ROA's standard deviation was 25.21 indicating volatility in returns.

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On average ROE was 14.2% with a minimum loss of 143.80% and a maximum return of 62.460%, ROE standard deviation was 24.3 indicating volatility in returns. Disclosure of CGI averaged at 68%, ranging from 47.5% to 87.5%. DSE-listed enterprises satisfied 68% of CGI disclosure requirements on average. Such findings imply that stakeholders didn't obtain the whole package of CGI information they wanted, according to CMSA (2002). Inadequate CGI disclosure may exacerbate agency problems and affect stakeholders' assessments of governance quality and capacity to drive the firm towards profitability (Kemei, 2017)

Average company age since incorporation was 23 years, and average business size was 7.6 out of 10. Data also showed that 61.9% of firms were geographically diverse. Average sales growth of 82.6% shows that firms were stretching their selling and distribution over time. All variables have skewness values between 0 and 0.9 and kurtosis values between 1.4 and 2.6, suggesting normally distributed data with light tails (Jaume et al, 2020).

Regression Analysis for CGI disclosure and Firm Profitability

In order to assess the nature of the connection that exists between the dependent and independent variables, a random effect model was used after conducting a hausman test. The regression was performed using two different estimates in order to assess whether or not the findings were consistent. The outcomes of the regression analysis are shown in Tables 3 and 4, respectively.

Table 3: Corporate governance disclosure and firm profitability (ROA)

Variables	(1) ROA	(2) ROA
Corporate governance disclosure	161.8623*** (58.611)	179.7050*** (58.844)
Firm size	3.3019** (1.383)	
Firm age		1.4024*** (0.393)
Geographical diversification	13.7440** (6.344)	
Sales growth	1.0549***	1.0554***

	(0.125)	(0.124)
Firm dummy	Yes	Yes
Time dummy	Yes	Yes
Constant	-130.9321***	-119.2496***
	(40.938)	(41.144)
Observations	265	265

Standard errors in parentheses Key: * Significant at 10%, ** significant at 5%, *** significant at 1%

Source; author analysis

CGI disclosure had a positive and statistically significant effect on ROA in all two estimations as seen in Table 3. These findings are similar to those of (Panchasara & Bharadia, 2013) and (Herbert & Agwor, 2021) who also concluded that corporate governance disclosure positively affected ROA of firms they studied. The results contradicts those of (Harisa *et al.*, 2019) and (Lishenga & Mbaka, 2008) who failed to establish any significant effect of CGI disclosure on ROA. CGI disclosure proved to have significant positive effect on ROA in all two models, even when specific control variables were removed, indicating that the results are robust. These results supports the stakeholders' theory which proposes that firm's effective existence is linked to its ability to satisfy the interest of stakeholders, by doing an activity that enhances firm's ROA that notion is reinforced as profitability is the main interest of investors and lenders (Lado-Sestayo & Vivel-Búa, 2019).

Interviews with some key informants (KIs) were conducted in order to gain a more in-depth and crystal-clear image of the connection between CGI disclosure and ROA. The perceptions that were gathered from their point of view suggested that CGI disclosure makes stakeholders more likely to have faith in the corporation's governance practices which enhances ROA. Through the disclosure of CGI, all parties concerned have the impression that those in charge of governance are acting appropriately and making sound judgments with regard to the appropriate use of available resources. During the course of the interviews, one of the managers of the company mentioned that;

“CGI disclosure Inspires confidence among stakeholders as it portrays a glimpse of atmosphere of the system of rules and standards that govern our company's operations and align the

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interests of our stakeholders. The disclosure also gives an indication of Good corporate governance procedures and ethical business practices which contribute to financial viability. I remember receiving a phone call from a non-investor who was impressed by the fact that our top 10 disclosed shareholders were 75 percent Tanzanians, and he clearly stated that he would continue to buy our products in order to support his fellow countrymen. You can only imagine the number of people who feel the same way. In the end, I am certain that CGI disclosure will have a positive impact on firm's ROA" (firm manager)

Table: Corporate governance disclosure and firm profitability (ROE)

VARIABLES	(1) ROE	(2) ROE
Corporate governance disclosure	50.3829** (21.801)	47.1304** (21.765)
Firm size	6.1361*** (1.564)	
Firm age		1.8139*** (0.456)
Geographical diversification	14.1474*** (5.492)	
Sales growth	1.1506*** (0.213)	1.1460*** (0.213)
Constant	-45.5764** (18.705)	-42.0979** (18.728)
Observations	265	265

Standard errors in parentheses Key: * Significant at 10%, ** significant at 5%, *** significant at 1%

Source; author analysis

CGI disclosure had a positive and statistically significant effect on ROE in all two estimations as seen in Table 3. These findings are similar to those of (Kaur & Vij, 2017; Assenga et al, 2018)

who also concluded that corporate governance disclosure positively affected ROE of firms they studied. The results contradicts those of (Buallay, 2017;Khanifah, Hardiningsih, Darmaryantiko, Iryantik, & Udin, 2020) who failed to establish any significant effect of CGI disclosure on ROE. CGI disclosure proved to have significant positive effect on ROE in all two models, even when specific control variables were removed, indicating that the results are robust. These results support the stakeholders' theory which proposes that firm's effective existence is linked to its ability to satisfy the interest of stakeholders, When CGI disclosure is linked to positive ROE enhancement it indicates that the firm has made effective use of the monies that has been invested by shareholders and is able to offer investors with considerable profits at the present time. By engaging in activities that improve the ROE of the company, investors' primary interest in profitability is reinforced. (Lado-Sestayo & Vivel-Búa, 2019).

Interviews with key informants (KIs) were also carried out to obtain their perspective of the effects of CGI disclosure on ROE. According to the opinions that were obtained from their perspective, CGI disclosure makes shareholders more to believe in the governance procedures of the firm and consider their investments to be in safe hands. By disclosing CGI, all parties concerned have the assumption that the management is behaving appropriately and making sound judgments with regard to the appropriate use of the invested equity. This gives the impression that those in charge of governance are appropriately using available resources which ultimately enhances firm's ROE. In the process of conducting the interviews, one of the employees from Capital Market Regulatory authority stated that

“Our primary goal as a regulatory body is to safeguard the interests of the firm's shareholders. Every firm that wants to go public on the stock market must comply with the disclosure requirements, which is an absolute must. Shareholders may have a better understanding of a company's operational structure when the CGI is disclosed in the financial reports. Shareholder satisfaction increases when they know which individuals have power to operate the organization on their behalf and which individuals are responsible for how an organization's personnel act and perform. In essence Strong CGI framework provides for Effective and efficient operations which contributes towards firm's ROE, thus a disclosure is paramount” (CMSA representative)

Conclusion and recommendations

According to the findings of this research, a significant portion of companies who are listed on the DSE make public disclosures of CGI information. Disclosures of this kind are probably made with the intention of ensuring compliance with regulatory obligations and of boosting the trust of the firm's many different stakeholders. Results also revealed that CGI disclosures had a positive and significant effect on the profitability of public listed firms. Since the disclosures affect profitability then there is a need to develop necessary measures which will mandate that good corporate governance procedures and disclosures should be implemented in accordance with the GRI standards and local legal requirements.

We recommend that firm managers investigate the positive effects of CGI disclosure, improve their disclosure procedures, and make an investment into disclosure strategies that will bring even more value to stakeholders. The Tanzanian government need to devise an efficient and effective method for rewarding those who disclose CGI and penalizing those who don't disclose CGI. Better Systems for CGI disclosure are to be created and strengthened, regulatory authorities like CMSA should work toward this goal.

We propose that the area of potential future study may be narrowed by focusing on the disclosure practices of CGI across different sectors in Tanzania. In addition, the importance of each of the disclosure elements was treated the same throughout this investigation. Despite the fact that this helps to reduce biases, stakeholders may assign higher relevance on certain aspects of governance and less relevance on the other. There is a possibility that one facet of governance may be seen as a fundamental component and as such ought to be given greater weightage. Future studies might consider developing a weighted CGI disclosure index.

In similar view we also considered lack of weighted index as a limitation to this study. Perhaps the result would have been different if the items in the constructed CGI index were assigned weights in accordance to their relevance amongst stakeholders.

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Revisiting the Determinants of Bilateral Trade Flows with evidence from Tanzania: A Gravity Model Analysis

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Abstract

International trade is regarded as a powerful engine and enabler of the global economy as well as an important tool for economic development. This has led countries to implement export – led economic growth strategies through bilateral and multilateral trade relations. Tanzania as one of the countries in this stance has established bilateral trade relations with her trading partners. However, to date there are scant and mixed results on what determines bilateral trade flows. This paper aimed at examining the determinants of bilateral trade between Tanzania and its major trading partners. Panel data spanning from 1996 – 2019 covering 7 countries was used. Gravity model was used as a tool of analysis and was estimated using a random effect model. Results show that GDP exhibits both a U-shaped and an inverted U-shaped relationship with trade flows as opposed to existing literature. Population size, quality of institutions, and common language positively and significantly affects trade flows while membership to the East African Community and landlocked country reduces the volume of trade flow. The results imply that to improve bilateral trade between Tanzania and its trading partners, investments that boost GDP, quality and strong institutions, the use of common language and a well-developed infrastructure are vital.

Key words: Determinants, bilateral trade, Tanzania, gravity analysis

Introduction

International trade is regarded as a powerful engine and enabler of global economy as well as an important tool for economic development (UNCTAD, 2021). It enables the transfer of resources, goods and services across countries and thus linked to total factor productivity growth, poverty reduction, employment creation, and innovations which ultimately improves welfare of countries (Sakyi & Egyir, 2017). Trade is further predicted to increase firms' competitiveness,

technological spill overs, economies of scale, and foreign direct investment which further offers an opportunity of a country's integration with the rest of the World (Kareem, 2016; Asamoah *et al.*, 2019).

From the classical economic theories of international trade including the absolute advantage, Ricardian theory and Heckscher – Ohlin theory, countries engage in trade due to differences in production factors efficiency, opportunity cost and resource endowments (Verter, 2017). Furthermore, the gains from trade are attributable to technological advancement, imperfect competition, tastes, level of human capital development and per capita income, a decline in transport costs, and an increase in economic convergence between countries which are crucial for trade flows particularly in developing countries including those in Africa (Seck, 2017; Ignatius *et al.*, 2018).

Despite the potential gains of international trade, Africa's commitments to bilateral and multilateral trade agreements as well as a relatively abundant resources endowments, the continent has been deriving a limited benefit from trade with the rest of the World (Cudjoe *et al.*, 2020). This has been caused by the trade structure of most African countries which depend entirely on agricultural exports and natural resources whose demand is inelastic in nature with no diversification of exports; weak and poor quality of economic and social institutions, and lack of focus in the implementation of trade policies (Sakyi & Egyir, 2017; Modou & Hai, 2017; Agarwa *et al.*, 2022). Example, in the year 2015, African continent accounted for only 2.4% of total global exports relative to major exporting countries including China (13.7%), USA (9.1%), Germany (8%), and Japan (3.8%) (Verter, 2017).

Tanzania is not an exception in this stance. While Tanzania exports a number of commodities to its trading partners, agricultural exports primarily in its traditional exports including coffee, cotton, tea, sisal, tobacco and cashew nuts have been the major source of foreign earnings which accounts for over 30% of its total exports (URT, 2021). Its major trade partners include the members of the East African community (Kenya, Uganda, Rwanda, Burundi and the Democratic Republic of Congo), South Africa and China. The bilateral trade between Tanzania and its major trading partners has been increasing owing to established trade agreements particularly the East African Community Custom Union, the Sino-China trade cooperation with Africa and the Southern Africa Development Community free trade area (Ya & Pei, 2022). For example,

bilateral trade value between Tanzania and Kenya increased from 32.68\$ million to 599.34 \$ million in 1990 and 2019 respectively. The value of trade also increased from 5.18 \$ million to 534 \$ million with Uganda; from 5.76 \$ million to 273.70 with Rwanda; from 2.88 \$ million to 51.92 \$ million with Burundi; from 0.97 \$ million to 1511.22 \$ million with DRC, from 188.2 \$ million to 506.9 \$ million with South Africa and increased from 24.88 \$ million to 4181.07 \$ with China in the same period (IMF, 2022).

However, despite the observed increase in the value of bilateral trade between Tanzania and its major trading partners, the value of Tanzania exports have been marginally increasing with high volatility in its terms of trade expressed as an index of export prices to its import prices. Tanzania value of exports to its trading partners averaged at 73.11 million US \$ relative to imports value of 399.3 million US \$ over the period 1990 to 2019 signifying that Tanzania experienced unfavourable balance of payments. The net barter terms of trade index declined from 160.4 in 1987 and averaged to about 103.4 between 1990 and 2008 while it rose to 163.8 in 2019 (World Bank, 2020).

While the determinants of bilateral trade have been widely studied elsewhere (Ya & Pei, 2022; Karkanis, 2022; Guan *et al.*, 2021; Olulu-Briggs, 2021; Abasam & Salim, 2022), the literature on the determinants of bilateral trade flows between Tanzania and its major trading partners is scant. To my knowledge, there are only three previous studies in Tanzania. Mahona (2014) study focused on why Tanzania and Kenya dominate trade in EAC using period spanning from 2009 to 2011. A study by Epaphra (2016) focused on the determinants of export performance as a percentage of GDP ignoring the total trade flow values which has an effect on trade balance. In addition, a study by Leyaro (2021) examined the effects of forming and joining a regional economic integration bloc with respect to Tanzania leaving out the determinants of bilateral trade unexplored.

It is against this background that this paper is built on. The contribution of this paper is twofold. Firstly, the paper will contribute to the literature by examining the value of bilateral trade between Tanzania and its major trading partners (Kenya, Uganda, Rwanda, Burundi, DR Congo, South Africa and China) to examine the patterns of trade flows over the period 1996 to 2019. Secondly, it will add to the existing literature by examining the determining factors for the

bilateral trade flows between Tanzania and its major trading partners for policy formulation in both Tanzania and its trading partners for enhancing trade development.

The rest of the paper is organised as follows. Section 2 presents the theoretical and empirical review on pattern of trade and the determinants of bilateral trade flows. Section 3 examines the sources of data and the methodology employed in the analysis of the objectives whereas section 4 presents the results and discussion of the empirical findings. The conclusion and policy implications are presented on section 5.

Literature Review

Theoretical Underpinnings

The existence of trade between countries is explained by the international trade theories. This paper is built on the three theories: the resource endowment theory (H-O), new trade theory and the theory of universal gravitation. Based on the resource endowment theory, a country should export commodities which uses intensively its abundant factors and import commodities that uses intensively its scarce resources (Heckscher & Ohlin, 1991). Resource abundance determines the patterns of trade and the volume of trade between countries. A nation with a relatively more labour abundance should specialise in producing and exporting labour intensive commodities and import capital intensive products from the rest of the World. For example, the World Trade Organisation (2013) found a positive correlation between arable land abundance and agricultural produce exports particularly in Africa. Trading based on relative labour abundance leads to mutual beneficial trade between countries through reduction in costs of production (Ya & Pei, 2022). On the new trade theory (Eisenman, 2012), the emphasis is on the existence of heterogeneity between trading nations in terms of technological dynamics, geography, climate, and economy.

Similarly, the Universal gravitation theory (Tinbergen, 1962) was derived originally from the Newton's law of Universal gravitation. The Newton's law of universal gravitation asserts that "the level of attraction between two objects in the universe is directly proportional to the product of their masses and inversely proportional to square of their distance apart. The economic gravity model by Tinbergen (1962) shows the relative attractiveness between two trading countries

where the volume of trade flows is a function of the product of their economic masses “size” and inversely proportional to the distance between them. The basic model is given by equation 1 as;

$$T_{ij} = C \frac{Y_i^\alpha Y_j^\beta}{D_{ij}^\sigma} \dots \dots \dots (1)$$

Where, T_{ij} are trade flows from country i to country j , Y_i and Y_j are economic sizes of country i and country j , while D_{ij} is the distance between the economic centres or capitals two trading countries and C is the constant which equates to the Newton’s law of gravitation given that $\alpha = \beta = 1$ and $\sigma = 2$). Economic size of the country is measured by the gross domestic product (GDP) or the gross national product (Yang *et al.*, 2020; Vu *et al.*, 2020).

However, despite its intuitive explanations on the determinants of bilateral trade between countries, the original gravity model did not take into account on other factors that are crucial in explaining the intensity of trade flows among countries (Anderson, 1979; Krugman, 1979). Other factors that have been found to affect trade flows between countries include the use of common language and culture, belonging to a free trade area (FTA), sharing borders, common currency, availability of institutions, population of exporting and importing country and political stability (Mwangi, 2021; Jia & Yuhong, 2021; Olulu-Briggs, 2021). In this study, these additional variables to the original gravity model will be taken into account.

Empirical Review

This section presents a review of extant literature on the determinants of bilateral trade flow between countries. Specifically, based on international trade theory and previous literature, the variables reviewed include the effect of economic size of a nation, geographical distance, population of both exporting and importing country, resources availability, quality of institutions, political factors like belonging to a certain free trade area, common language and sharing border on the intensity of bilateral trade flow between Tanzania and its major trading partner.

Economic size

The size of the economy measured by the level of country’s gross domestic product (GDP) has been widely used by scholars as a main determinant of bilateral trade between countries. The level of GDP shows the relative supply ability of an exporting country and demand ability of an

importing country (Ya & Pei, 2022). The volume of trade is more likely to be larger between countries with relatively similar GDP which is also a reflection on the level of technological advancement (Liu *et al.*, 2020). Guan *et al.* (2021) examined factors affecting China – Mauritius bilateral trade using time series data spanning from 1997 to 2019. The study found that as the GDP of both Mauritius and China grow by 1%, the volume of bilateral trade increases by about 1.04%. Similarly, a study by Nasrullah *et al.* (2020) examined the determinants of China’s forest imports and exports of several forest commodities groups and a positive role of economic sizes of countries in forecasting the value and volume of trade flows between China and its trading partners.

Geographical distance

Distance between countries measured as a transportation mileage between two trading countries reflects the relative transaction costs of bilateral trade. Distance between two trading countries negatively affects the volume of trade since it increases the transaction costs (Mwangi, 2021). Leyaro (2021) study on the impacts of East African custom union (EAC – CU) on the trade performance in Tanzania show that the intensity of trade flow tend to decrease as the distance increase between Tanzania and its trading partners in the EAC –CU. The results further show that, a 10% increase in distance leads to about 24 -32% decline in trade flows. In addition, Karkanis (2022) conducted a study on the effect of distance on differentiated Greek’s export products and Chinese imports for a period 1995 – 2018. The results revealed that, distance negatively affects trade flows between China and Greek but the intensity varies across sectors.

Population size

The effect of population size on bilateral trade flows has been extensively studied but with inconclusive results. On one hand, some scholars including (Abula & Abula, 2021) asserts that population size in the importing and exporting countries has positive effect on trade flows. High population characterized by working age population increases the production, supply and hence export capacity of an exporting country while it increases the demand for products in the importing country making its inclination to increase the importation of commodities. On the other hand, some scholars argue that, an increase in population negatively affects the volume of trade flows. As the population of the country increases, pressure on scarce resources results and hence affects the level of production and exports of an exporting country while it leads to self -

sufficiency in an importing country due to availability of labour who can produce for domestic use (Wenxia *et al.*, 2019).

Resources Availability

Existence of heterogeneity in resources endowment between countries explains pattern of trade flow between countries. As postulated by the H-O theorem, a country will produce and export a product that uses intensively its abundant factor and import a product whose production requires intensive use of its scarce resource. For example, a study by Yeboah *et al.* (2022) on the determinants of forest trade between China and ECOWAS member states found a positive correlation between trade volume and natural resources endowment but it was negative with exports.

Quality of Institutions

Institutions are rules and arrangements governing the social and economic relationships (North, 1990; Gold and Rasiah, 2021). The quality of institutions including the control of corruption measured on a scale ranging from -2.5 (weak) to 2.5 (strong) may hinder or facilitate trade flows (*ibid*). For example, a study by Asamoah *et al.* (2019) on the role played by institutions on trade openness, foreign direct investment and economic growth in Sub-Saharan Africa revealed that the effects of FDI on economic growth declines with weak or absence of institutions and found a positive effect of institutions on trade openness and economic growth which all have effect on bilateral trade flows. Quality of institutions affects trade openness which further affects economic growth (Yusuf *et al.*, 2021). Furthermore, a study by Yeboah *et al.* (2022) found a negative correlation between the quality of institutions and the trade volume between China and ECOWAS member states.

Political factors

Political factors includes the existence of regional economic cooperation (RECs), free trade area like the East African custom union, and the common market for Eastern and Southern Africa (COMESA). Other factors include sharing of borders, common language, common currency and colonial relations. These factors altogether have impact on the intensity of bilateral trade flows. A study by Ridwan (2020) show that the China –ASEAN free trade agreement has brought positive impacts on the extent of palm –oil trade flow between China and Indonesia.

Furthermore, the formation of the EAC – CU has led to an increase in the volume of exports specifically to Tanzania from 6% in 1997 to about 16% in 2015 (Leyaro, 2021). In addition, the Chinese “one belt, one road” initiative has brought a profound increase in trade between China and its trading partners particularly those in Africa (Ya & Pei, 2022).

Methodology

Data Sources and sample selection

This study used panel data extracted from the International monetary Fund (IMF) direction of trade statistics database, World development Indicators (WDI), World governance indicators (WGI) and the Penn World Table. It is a panel of 8 countries including Tanzania and its major trading partners (Kenya, Uganda, Rwanda, Burundi, DR Congo, South Africa and China) spanning for a period from 1996 to 2019 making a total of 168 (i. e 24 years x 7 trading partners) observations. The time span under study was selected based on data availability for the variables of interest while the countries selected was based on the volume of bilateral trade between Tanzania and the trading partner as well as membership to the East African Community custom union. Table 1 show the description of data sources with their measurements.

Table 1: Description of variables used in the analysis

Variable	Description	Priori	Theoretical reasons	Source of data
T_{ij}	Trade volume between Tanzania and its trading partners (Million US \$)			IMF DOTS database
GDP_{it}	GDP of Tanzania (Mill. US \$)	+	Reflects the potential trade supply of Tanzania	Penn World Table
GDP_{jt}	GDP of partner countries (Million US \$)	+	Reflects the potential trade demand of trade partner	Penn World Table
$DIST_{ij}$	Distance between Tanzania and major centers in partner	-	An increase in distance increases the transaction costs	CEPII

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	countries (Nautical miles)			
C _{ij}	Capital endowment in country i and j	+	The more the endowment the more the output	Penn World Table
Control corr. Tanzania	Quality of Control of corruption in Tanzania (-2.5 weak, 2.5 strong)	+	Reduces transaction costs	World governance indicators
Control corr. Partner	Quality of Control of corruption in partner countries (-2.5 weak, 2.5 strong)	+	Reduces transaction costs	World governance indicators
FTA	Dummy for free trade area (1=member, 0 = otherwise)	+	Less trade barriers facilitates trade flow	CEPII
POP _i	Population of Tanzania (million)	+/-	Reflects demand and supply capacity	Word Development indicators
POP _j	Population of partner countries (million)	+/-	Reflects demand and supply capacity	Word Development indicators
C. language	Common official language	+	Facilitate communication	CEPII

Source: Author compilation from previous studies

Model specification and estimation strategy

Since this study aims at examining the determinants of bilateral trade flows between Tanzania and its major trading partners, and following previous studies (Santeramo & Lamonaca, 2019; Sakyi & Afesorgbor, 2019; Santeramo *et al.*, 2018; Leyaro, 2021), a standard gravity model was used. The model asserts that, trade flows between country *i* and country *j* is determined by the economic sizes of country *i* and country *j* (proxied by GDP_i and GDP_j) and economic distance between them (transport cost is used as a proxy). From the standard gravity model given in

equation 1, the model can be transformed by applying natural logarithms to take into account the heteroscedasticity inherent in panel data and facilitating the linear estimation (Ya & Pei, 2022). Thus, equation 1 transforms into;

$$\ln T_{ijt} = \alpha_0 + \alpha_1 \ln Y_{it} + \alpha_2 \ln Y_{jt} - \alpha_3 \ln DIST_{ijt} + \mu_{ijt} \dots \dots \dots (2)$$

By adding other variables hypothesized to affect trade flows apart from those in the standard model, the equation transforms to the following extended model;-

$$\ln T_{ijt} = \alpha_0 + \alpha_1 \ln Y_{it} + \alpha_2 \ln Y_{jt} + \alpha_3 \ln DIST_{ijt} + \alpha_4 \ln Corr_{it} + \alpha_5 \ln Corr_{jt} + \alpha_6 \ln Pop_{it} + \alpha_7 \ln Pop_{jt} + \alpha_8 \ln Cap\_endowment_{ijt} + \delta_1 D_{1ijt} + \delta_2 D_{2ijt} + \delta_3 D_{3ijt} + \delta_4 D_{4ijt} + \mu_{ijt} \dots \dots \dots (3_W)$$

here, T_{ijt} is the trade volume between country i and country j at time t , Y_{it} and Y_{jt} are economic size of country i and country j , $DIST_{ijt}$ is the transport distance between major cities/ports of country i and country j , $Corr_{it}$ and $Corr_{jt}$ is the control of corruption in country i and country j as a measure of institutional quality, Pop_{ijt} is the size of population, $D_{1ijt} - D_{4ijt}$ are dummies for member of East African free trade area, share border, common language, similar colony.

By considering the unobserved multilateral resistance term variables that are likely to influence bilateral trade but not captured in the standard bilateral trade model, equation 3 was estimated by a random effect model. This model takes into account unobserved heterogeneities that are time invariant and which are likely to direct correlate with the trade flows variable (Sakyi & Afesorgbor, 2019). The results and discussion from this analysis are presented in the next section.

Results and Discussion

Descriptive statistics

Table 1 presents the descriptive statistics of trade between Tanzania and its major trading partners for a period 1996 – 2019. On average, the trade volume between Tanzania and its major trading partners during this period is about 580.1 million US\$ with a maximum volume valued at 4664.7 million US\$. The Tanzania gross domestic product (GDP) averaged at 73,858.7 million US\$ relative to that of its trading partners which averaged at about 1778715.6 million US\$. With regard to control of corruption as measure of institutional quality taking the values ranging

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from -2.5 for weak institutions to 2.5 representing strong institutions, both Tanzania and its major trading partners have weak institutions averaging at -0.51 and -0.57 respectively.

Of the total value of trade volume, Tanzania exported a total of goods valued at 89.45 million US\$ and imported goods valued at about 494.1 million US\$ implying that Tanzania experienced unfavourable balance of payment during the period under consideration. Furthermore, the average transportation distance between Tanzania and its major trading partners averaged at about 1833.2 nautical mile with a minimum and maximum distance of 362.4 and 7750 nautical miles respectively. In addition, the population of Tanzania averaged at 41 million while that of partner countries was about 220 million signifying a potential market for Tanzania products.

Table 1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Trade value (million US \$)	168	580.079	938.919	0	4664.659
Tanzania GDP	168	73858.689	31539.758	35050.621	139809.58
Partner GDP	168	1778715.6	4539486.4	4435.95	20257660
Control of corruption TZ	168	-.512	.249	-.805	0
Control of corruption partner	168	-.566	.634	-1.723	.763
Exports to TZ (million US \$)	167	494.1	861.671	0	4287.329
Imports from TZ	167	89.452	127.907	0	770.05
Distance	168	1833.159	2461.903	362.36	7750
Population in TZ	168	41.155	8.11	29.631	56.38
Population of Partner country	168	219.981	459.564	6.013	1427.648
K endowment	168	3.768	3.739	1.002	15.984

Source: Author computations from IMF DOTS data (2022)

Patterns of Trade

Table 2 presents the pattern of trade between Tanzania and its major trading partners by disaggregating the pattern by each partner to find out the direction of Tanzania imports and exports to and from members in the East African Community and those outside the community. Table 2 shows that, in the East African region, Tanzania trades more with Kenya than the rest of East African countries put together averaging at about 401 million US\$. This is supported by the use of common language, close proximity (about 362.4 nautical miles) relative to the rest of East African community members as well as a closely related size of population (41.2 million for Tanzania and 39.8 million for Kenya) which reflects the production and demand capacities of the two countries and their relative economic size (Leyaro, 2021). However, the findings further show that, Tanzania trades more with the partners outside the East African community.

The high volume of trade to and from Tanzania is with China (1657.5 million US\$), the Democratic Republic of Congo (1423.6 million US\$) and South Africa (400.2) as compared to the East African member states total of 579.1 million US\$. This signifies that a significant proportion of Tanzania trade is channelled to countries outside the East Africa region. This is consistent with the Leyaro (2021) study which revealed that about 70% of all exports from Tanzania goes to the rest of the World and about 20% goes to other countries in Africa beyond the East African countries borders. This direction of Trade particularly between China, South Africa and Tanzania is explained by the Tanzania's demand for capital goods from China and South Africa with relatively high capital endowment of 5.3 and 11.9 respectively (Table 2).

In return, with relatively large land endowment for agricultural produce and natural resources in Tanzania which are highly demanded in China and South Africa to feed their domestic industries, this makes these countries to trade more with Tanzania as shown by the trend in Figure 1 (Ya & Pei, 2022). The volume of trade between Tanzania and Congo is largely influenced by the need for food particularly in Eastern Congo provinces of Kivu and Ituri where there is frequent outbreak of wars and thus affecting food production.

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Table 2: Patterns of trade between Tanzania and its major trading partners (1996 – 2019)

Tanzania major trading partners (1996 - 2019)							
Variable	Kenya	Uganda	Rwand a	Burund i	DR Congo	S. Africa	China
Trade value	401.1	92.2	58.1	27.7	1423.6	400.2	1657.5
		73858.	73858.	73858.			
Tanzania GDP	73858.7	7	7	7	73858.7	73858.7	73858.7
	112855.	52690.	14925.			592572.	11624150.
Partner's GDP	2	2	5	6559.4	47255.6	6	5
Control of corr.							
TZ	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Control corr.							
partner	-0.9	-0.8	0.1	-1.0	-1.2	0.2	-0.4
Exports to TZ	304.5	30.3	3.4	1.0	1287.7	364.4	1446.8
Imports from TZ	100.8	61.9	54.7	26.8	135.9	35.8	210.7
Trade balance	-203.7	31.6	51.3	25.8	-1151.8	-328.6	-1236.1
Distance	362.4	587.4	623.9	628.3	1103.1	1777.0	7750.0
Population TZ	41.2	41.2	41.2	41.2	41.2	41.2	41.2
Population							
Partner	39.8	30.9	9.5	8.3	61.4	50.0	1340.2
K endowment	1.5	1.4	2.1	2.5	1.7	11.9	5.3

Source: Author computations from IMF DOTS data (2022)

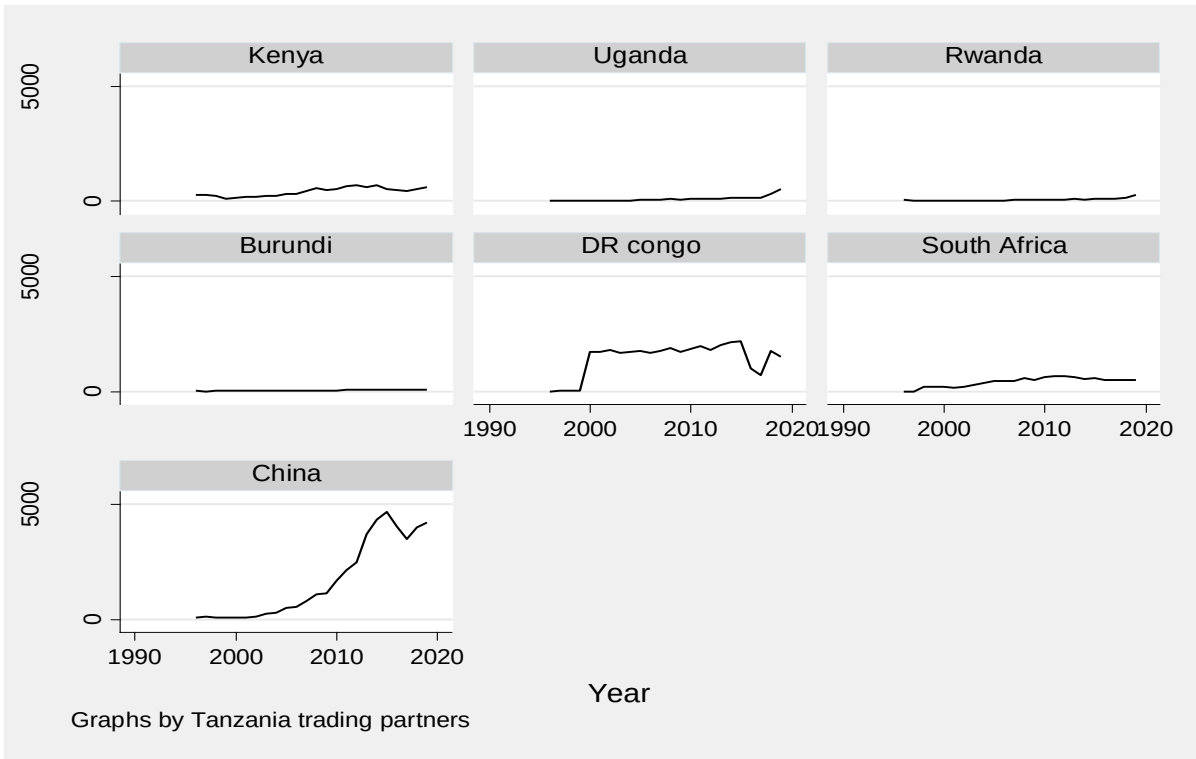


Figure 1: Trends of the volume of trade - Tanzania and its major trading partners (1996- 2019)

Source: Author computations from IMF –DOTS data (2022)

Tanzania also experienced a negative balance of trade with China, South Africa, DR Congo and Kenya and with a positive balance of trade with the rest of East African member states whose bilateral volume of trade was relatively low. The control of corruption as a measure of institutional quality was high in Rwanda and South Africa while DR Congo, Kenya and Uganda are more prone to corruption incidences compared to the rest of Tanzania trading partners which has also effect on trade volume and direction.

The findings on the pattern of trade (Table 2) between Tanzania and the selected major trading partners is also supported by figure 2 and 3 showing the percentage of imports and exports between Tanzania and other selected regional blocks in Africa and the rest of the World (RoW). The graphs supports the descriptive statistics in Table 2 with large share of Tanzania imports and exports volume being traded outside the East African region.

Table 3: Correlations matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) TRADE	1.00									
	0									
(2) TZ_GDP	0.34	1.00								
	9*	0								
(3) Partner_GDP	0.71	0.17	1.00							
	4*	7*	0							
(4) Contr. Corr.TZ	-	-	-	1.000						
	0.11	0.13	0.03							
	1	5	3							
(5) Contr. Corr. partner	-	-	0.13	0.265	1.00					
	0.13	0.12	2	*	0					
	9	4								
(6) World_GDP	0.36	0.95	0.17	-	-	1.00				
	0*	7*	7*	0.183	0.14	0				
				*	7					
(7) Distance	0.49	0.00	0.88	0.000	0.19	0.00	1.00			
	3*	0	0*		9*	0	0			
(8) Pop_TZ	0.35	0.99	0.17	-	-	0.97	0.00	1.00		
	7*	6*	8*	0.152	0.13	2*	0	0		
				*	1					
(9) K_endowment	0.19	0.08	0.28	-	0.48	0.10	0.31	0.09	1.00	
	4*	8	3*	0.039	2*	7	1*	3	0	
(10) Pop_Partner	0.51	0.02	0.90	-	0.12	0.02	0.98	0.02	0.18	1.0
	5*	8	8*	0.005	7	8	6*	8	8*	00

*** p<0.01, ** p<0.05, * p<0.1

Source: Author computations from IMF DOTS data (2022)

Similarly, the correlation matrix on Table 3 show that there is a positive and significant ($p<0.05$) association between the GDP of both exporting country (Tanzania) and importing

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country(trading partner), population size in both exporting and importing countries, and capital endowment on the volume of trade between Tanzania and its trading partners.

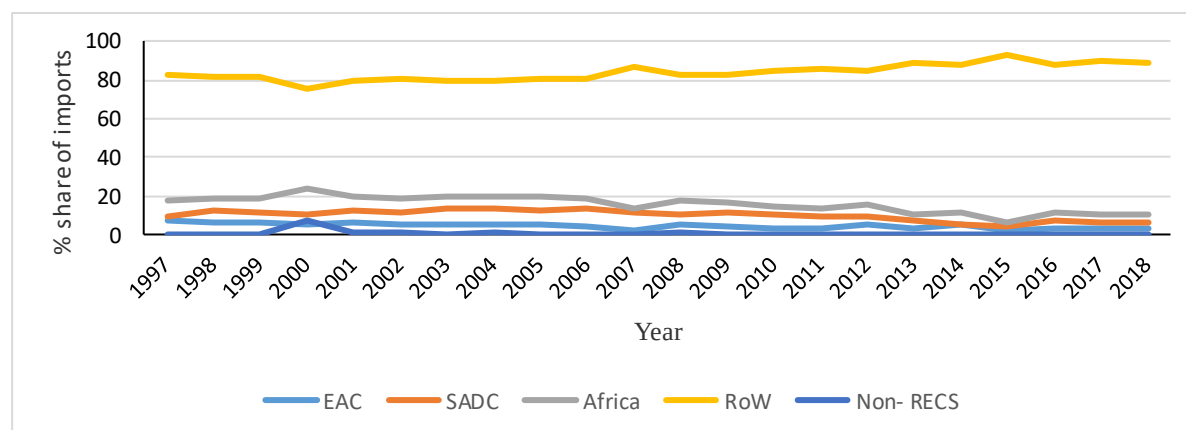


Figure 2: Tanzania imports

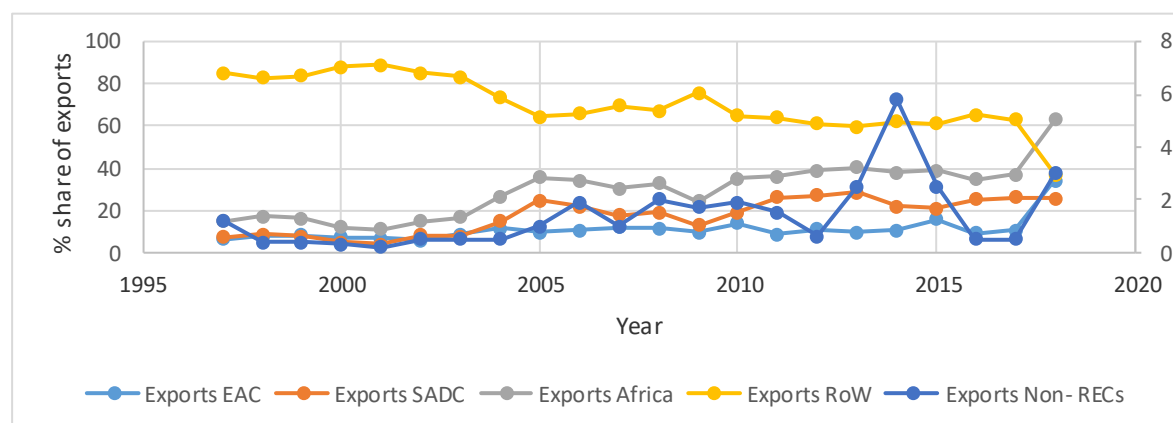


Figure 3: Tanzania exports

Source: Author computations from IMF DOTS data (2022)

Determinants of Bilateral trade between Tanzania and its trading partners

The determinants of bilateral trade between Tanzania and its major trading partners are presented in Table 4. Following the Hausman test (Appendix 1) on the suitability between the random effect and fixed effect model, the result was in favour of the random effect and hence the discussion of the findings in this paper relies on the random effect estimates. The Wald statistic was also significant ($p < 0.01$) implying that the model was correctly predicted. Among the variables included in the model, economic size of both importing and exporting measured in

GDP, population of importing country, the extent of control of corruption in both exporting and importing country, being a member of the East African community free trade area, common language and landlocked status of a country were found to be significant determinants of bilateral trade between Tanzania and its major trading partners.

From Table 4, the GDP of an exporting country (Tanzania) was found to be positive and significantly affecting the trade flows between Tanzania and its major trading partners. An increase of the Tanzania GDP by 1% leads to an increase in the volume of commodities traded by about 36.1% *ceteris paribus*. This implies that an increase in the size of GDP of an exporting country is a reflection of the country's ability to supply for export market. However, the result show that the relationship is curvilinear and not linear as predicted by the gravity theory and previous studies (Ya & Pei, 2022; Guan *et al*, 2021; Irshad &Anwar, 2019).

Initially, trade volume increases with an increase in GDP but later on, as the GDP continue to rise, the volume of exports declines. This is explained by the reason that initially the home demand is not sufficient to offset an increase in supply of a commodity, but in the long run, as the level of production continues to increase, income increases which triggers more demand making the produced commodities absorbed by the domestic market.

Similarly, the effect of an importing country GDP on the volume of trade flow with Tanzania is not linear. Initially, the increase in the importing country's GDP by 1% decreases the volume of trade by about 3.4%. This implies that as the domestic production improves, the demand for foreign goods declines. However, as the GDP continues to increase beyond a certain level, it leads to an increase in the demand for more goods backed by an increase in the purchasing power and hence leads to trade volume flow. The result is consistent with the previous study by Umutesi (2018) in Rwanda.

Table 4: Determinants of bilateral trade flows between Tanzania and its major partners

	Random Effect (RE)	Fixed Effect(FE)
Variable	Ln(TRADE)	Ln(TRADE)
ln (exporter GDP)	36.05** (11.33)	43.84** (13.63)

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(Ln(Exporter GDP)) squared	-1.427** (0.466)	-1.494** (0.513)
ln(GDP) of importer	-3.402* (1.521)	-6.633** (2.276)
(ln(GDP of importer)) squared	0.141*** (0.0367)	0.238** (0.0748)
Ln(REMOTE)	-1.082 (0.706)	-0.115 (1.120)
ln(Population) of exporter	-5.526 (13.65)	-20.54 (15.53)
ln(Population) of importer	1.748*** (0.466)	5.249* (2.242)
ln (capital endowment)	0.0974 (0.245)	0.206 (0.264)
Control of corruption in exporting country	-0.590* (0.293)	-0.703* (0.299)
Control of corruption in importing country	0.564* (0.246)	0.765** (0.269)
Member of EAC - FTA (1=yes, 0=no)	-2.168** (0.713)	
Common Language (1=yes, 0=no)	1.090** (0.393)	
Common Colonizer (1=yes, 0 = no)	0.977 (0.531)	
Landlocked country (1 yes, 0= no)	-1.994** (0.631)	
Constant	-198.9*** (51.38)	-199.6*** (57.16)
N	166	166

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R ²	0.6536	0.6632
Wald test, F	849.5(0.0000)	29.34(0.0000)

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The coefficient of distance measured by the degree of remoteness yielded the expected negative sign since it is an indicator of an increase in transaction cost between the trading partners. However, it was not significant. The insignificance of the coefficient may be explained by the reason that, with advancement in technology particularly information and communication technology associated with improved human capital that increases the speed of trade flows and which in turn diminishes the transactions costs leads the physical distance between trading partners less significant.

Furthermore, the population of an importing country significantly and positively affects the bilateral trade flow. As the population in the importing countries (Tanzania trading partners) increase by 1%, the trade volume increases by about 1.75% *ceteris paribus*. This is explained by the reason that, an increase in population of an importing country reflects an increase in expenditure of an imported commodity which further increases its market share and eventually an increase in trade flows. The results corroborates with those of previous studies (Sheikh *et al.*, 2019; Assefa *et al.*, 2014; Aboulez, 2016; Lv *et al.*, 2019). However, this is contrary to other scholars (Wenxia *et al.*, 2019) who found a negative effect with a view that high population provides labour force and thus leads to higher production, relatively self-sufficiency of domestic goods and hence less need for foreign goods. Thus, it can be concluded that population growth has both positive and negative effect on bilateral trade flows.

Similarly, as the importing country's quality of institutions measured in this study by the level of control of corruption, the bilateral trade volume increases. A 1% increase in the level of corruption control in an importing country leads to an increase in the trade volume by about 0.56% *ceteris paribus*. Quality institutions reduce information asymmetry and thus leads to a decrease in transaction costs to both importing and exporting country (Gold & Rasiah, 2021). However, in the exporting country, the coefficient was negative and significant which means that as control of corruption improves, the volume of exports decreases. This is contrary to priori expectation. From previous study (Hu & Marrewijk, 2013), the result signifies that there are some

countries including China that are likely to trade more with countries having weaker institutions to reap maximum benefits from of the trade.

The use of common language between Tanzania and its trading partners has positive and significant effect on the volume of bilateral trade. The volume of bilateral trade flow is higher by 97.4% in countries that share common language with Tanzania than those that uses other official languages. This is caused by the reason that common language facilitates efficient communication and thus reduces transaction costs between the trading partners. On the contrary, being landlocked reduces the volume of trade by about 86.4% compared to those non-landlocked countries holding other factors included in the model constant. This explains also why Tanzania trades more with Kenya, South Africa and China compared to other landlocked countries in the East African community since being landlocked increases the transaction and production costs (Essen, 2017; Ya & Pei, 2022).

Contrary to priori expectation, the coefficient for membership to the East African community free trade area (EAC – FTA) was negative and significant. This implies that the bilateral trade between the EAC- FTA member states is lower by about 88.6% compared to the flow of trade to and from non- member states. This is justified by the reason that most East African member states depend entirely on agricultural exports and hence lack diversification which motivates them to find markets outside the region. This has also been evidenced by the descriptive statistics where the volume of trade to and from Tanzania is higher to non –East African member states. The result supports those of previous study (Leyaro, 2021).

Conclusion

This paper aimed at examining the pattern and determinants of bilateral trade between Tanzania and its major trading partners. The gravity model of international trade was used as a building block of this paper while the random effect model was used in the estimation of the determinants of trade flows. The findings show that Tanzania trades more with countries outside the EAC region particularly South Africa, DR Congo and China. In the East African block, the volume of trade is higher between Kenya and Tanzania which account for more than 70% of all trade flows in the region which is a reflection of a relative factor abundance, technological level and the size of GDP. The results are consistent with the Ricardian theory of comparative advantage, and Heckscher – Ohlin theory of resource endowment.

Empirical findings show that the size of the economy measured in GDP, population size, quality of institutions, population size and common language significantly and positively affects the intensity of bilateral trade flows while being a landlocked country and EAC-FTA membership have negative effects. For example, 1% increase in the Tanzanian herein referred to as an exporting country GDP leads to about 36.1% increase in the bilateral trade flows ceteris paribus. However, the influence of GDP in both exporting (Tanzania) and importing countries (Tanzania major trading partners) exhibited a non-linear relationship with trade flows as opposed to findings from previous studies.

The findings imply that, to improve the intensity of bilateral trade between Tanzania and its trading partners, efforts should be devoted in increasing the size of the economy, improving the quality of institutions that governs trade flows including the control of corruption, and having common language to be used in trading activities among members trading partners. In addition, having a free trade area is necessary but not a sufficient condition for the improvement in bilateral trade flows. To make it efficient, there should be efforts to improve infrastructure, diversify production and innovate new products which will in turn improve the comparative and competitive advantage among the trading partners.

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Appendix

Appendix 1: Hausman (1978) specification test

	Coefficient.
Chi-square test value	4.254
P-value	0.894

H_0 : Random effect is appropriate H_1 : Fixed effect is appropriate

Since the Chi-square P-value is insignificant, we fail to reject the null and hence, the random effect model was chosen as an appropriate model for this study.

The Effect of Resource Availability on Foreign Direct Investment. The Case of Kibaha District.

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Abstract

The general objective of this study was to assess how resource availability affects foreign direct investment location decision in Tanzania. A case study research design was used whereby Kibaha district in Pwani region was used as the area of study and the researcher made use of both primary and secondary data. The Data was gathered from a total population of 39 registered companies operating in Kibaha district with at least two respondents taken from each company. A Correlation analysis and Regression analysis of variance was employed using the Statistical Package for the Social Sciences (IBM SPSS) statistical software to determine the relationship and the significance of the relationship between the independent variable and the dependent variable. Findings show there is a significant positive relationship between resource availability with FDI location decision. It was concluded that with regards to Kibaha district in particular, the benefits of ample availability of natural resources and geographical advantage are offset by problems with electricity and water supply hindering further investment from foreigners as it is rendering the place undesirable. Finally, the study recommends that to fully exploit the benefits of FDI the government needs to address the problems that have been identified as a hindrance to investors exploiting the availability of natural resources through investment in the area.

Keywords: Foreign direct investment, Multinational companies, Resource availability

Introduction

Foreign Direct Investment (FDI) has been one of the prominent features of the global economy today, it's one of the major driving forces behind international trade. The modern global economy makes countries see FDI as the inevitable source for growth and development. The inseparability of economic growth with FDI makes many countries specifically developing ones in Africa to settle more policies and strategies to attract FDI. But, FDI usually goes to the countries where it is possible to combine the ownership advantages with the location specific advantages of the host countries through internalization advantages of foreign investments (UNCTAD, 1998). Selection of where multinational companies choose to invest, is one of the main critical issues, A clearer understanding of the manner in which multinational corporations choose a location for investment and identify key determinants of FDI location is paramount to explain the differences in inward FDI flows between nations, but also the creation of adequate policies of the host country for FDI.

From early 1980's Tanzania has tried her level best to make the country the best destination of FDI through major changes in policies of investment, minimization of direct involvement in business, opening doors for business, fighting corruption and forming TIC as Active actor of attracting FDI. Despite the whole efforts in Tanzania the rate of FDI growth still face some setbacks which affect its direct contribution. After nearly a decade of double-digit growth, Tanzania's rate of GDP growth slowed over the course of two years from 2018 to 2020. FDI inflow experienced decline and weaving growth from 2016 to 2020. Aggressive revenue raising measures and unfriendly investor legislation have made investment less attractive in recent years. Labor regulations issues make it difficult to provide employment for foreign employees, even when the local labor force fail to provide the demanded manpower. Corruption, mostly in government procurement, privatization, taxation, and customs clearance remains a concern for foreign investors, though the government has prioritized efforts to combat the practice.

Statement of the Problem

Foreign Direct Investment is widely considered by many international organs, politicians, and economists, as a factor that enhances economic growth and the solution to the financial problems of developing countries (Mencinger, 2003). Multinational corporations in Tanzania have shown positive impact on the people's social life and economic aspects in the country. They have

increased investment levels and income among the citizens of Tanzania; they have promoted improvement in their immediate environment. They have created access to high-quality managerial skills due to increased technology and interactions as well as intercultural values.

Natural resources in Tanzania offer a wide range of FDI opportunities, for example, minerals, tourist attractions, and arable lands are possible areas waiting for FDI flow. Tanzania is renowned for wildlife attractions abundance and unexploited mineral reserves. Despite all of that, the rate of FDI growth still face some setbacks which affect its direct contribution to GDP. This decline can be observed more recently as the growth between five years from 2016 to 2020 has not recovered to pre-2015 levels. It is in light of that, that the basis for carrying out this study is founded, therefore this study examines the effect of resource availability on FDI location decision in Tanzania, the case of Kibaha District in Coast Region

Research Objective

The main objective of this study was to assess how resource availability affects foreign direct investment in Tanzania

Theoretical review

Eclectic theory

The eclectic theory also known as the theory of advantages of ownership, location and internalization (OLI) refers to the advantages of ownership, geographic location and inland. Eclectic is one of the economic theories proposed by Dunning (1979). This theory explains the advantages of national ownership and organizations owning large-scale capital will have the opportunity to develop and increase economic resources in expanding outward scope. The geographical advantages expressed by the natural resources, a particular nation or an organization are considered as competitive advantages to utilize, exploit, or form a basis for collecting the resources from outside. The advantages of localization represent the internal strengths of the nation itself or the organization by taking advantage of internal resources for development and creating their own strengths to ensure autonomy and avoid dependence (Dunning, 1979). This theory is applied in the model to explain the factors related to inherent advantages of Kibaha district's resources and strategical geography, which affect FDI attraction.

Empirical review

Effect of Resource Availability to FDI

For Africa and the Gulf region specially, it is known that FDI is mainly driven by natural resources abundance, called resource- or asset-seeking FDI. This type of FDI seeks to invest abroad to acquire resources not available in the home country, such as natural resources, mainly oil and coal, and raw materials that would otherwise be expensive to import to home country. In their panel model on 25 transition economies between 1990 and 1998, Campos and Kinoshita (2003) found that natural resources abundance has a significant and positive effect on FDI. Similarly, Onyeiwu and Shrestha (2004) found that natural resource availability is a significant factor in FDI attraction in their study on FDI flows to Africa based on a panel dataset of 29 African countries over the period 1975 and 1999.

In contrast, Asiedu (2013) tested the significance of natural resources on attraction of FDI in 99 developing countries. She employed two different measures of natural resources, share of fuel of total merchandise exports and oil rent as a percent of GDP. She found that natural resources have a negative effect on FDI. This is consistent with the “FDI-natural resources curse”, where countries with abundant natural resources tend to grow slower than countries with scarce natural resources (Sachs & Warner, 2001). Similarly, Poelhekke and Ploeg (2010) found that natural resources boost FDI in the resource sector but crowds out FDI in the non-resource sector, and that the total FDI is less in resource rich countries due to the dominating effect on the non-resource sector. Thus the decline of FDI in Tanzania need more searching in consideration of natural resources as one of the negative, Positive or neutral factor.

Methodology

Study area

The study was conducted in Kibaha district in the coastal region of Tanzania, taking into studies all registered MNCs that have invested in Kibaha, Coast Region of Tanzania. Kibaha is chosen because it is part of the area in the coastal region that has been designated by the government for investment due to its strategic location making it the appropriate area for this study

Study design and sampling

The study employed a case study research design as a method that enables a researcher to closely examine the data within a specific context. The study target population was all 39 registered multinational companies that have invested in Kibaha district, Coast Region, Tanzania. The list of registered foreign companies is available at the Tanzania Investment Centre (TIC). Given the relatively low number of MNCs in the target population, for sampling the researchers used total sampling where the entire population was taken in for study. The study used non-probability sampling, whereby convenience sampling and purposive sampling were used.

Data collection and analysis

Data collection comprises both primary and secondary data. Whereby primary Data was gathered through issuing questionnaires and conducting interviews and secondary data was gathered through documentary review. The analysis of data was based on quantitative and qualitative approaches. Quantitative data analysis involved coding numeric and non-numerical responses to the data from research and using SPSS software to run frequency procedures for checking data entry errors and making summary statistics of the data and computing the analysis of variance, a statistical technique for investigating the difference between groups on some dependent variables. Qualitative analysis was undertaken to analyze qualitative data based on content theme obtained through interviews and questionnaires.

For statistical analysis, there are three dimensions that the researcher used to measure the effect of resource availability on FDI location decision; these are Land, Labour and Water and power. The assumption of the study is that resource availability influences the FDI location decision. The equation which describes the relationship between these variables is given below:

$$FDI = f(RA)$$

Where;

FDI = FDI location decision (dependent variable)

RA = Resource availability (independent variable)

The explicit form of the model can be stated thus:

$$FDI = B_0 + B_1 (WP) + B_2 (LB) + B_3 (LD) + e$$

Where,

WP= Water and power

LB= Labour

LD= Land

B_0 =constant of the model.

B_1 -4 = coefficients of the model.

e = disturbance terms or error term. It is assumed to be normally distributed with a mean of zero.

Therefore the final equation was as follows

$$FDI = B_0 + B_1 (WP) + B_2 (LB) + B_3 (LD) + e$$

Findings and Discussion

Effect of resource availability on FDI location decision

Table 3.1 Contribution of resource availability on FDI location decision

Input Resources	Contribution factor	Frequency	Percentage
Land	Strongly agree	41	51
	Agree	39	49
	Strongly disagree		
	Disagree		
Total		80	100
Labour	Strongly agree	58	72
	Agree	22	28
	Strongly disagree		
	Disagree		
Total		80	100
Water and Power	Strongly agree	36	45
	Agree	44	55
	Strongly disagree		
	Disagree		
Total		80	100

Field data, (2022)

The findings as shown in table 3.1 shows that availability of resources highly affect positively the foreign direct investor's decision. All respondents (100%) were in agreement that resource availability played a significant positive role in deciding to invest in Kibaha district. These findings are in agreement with an earlier study by Poelhekke and Ploeg (2010) which found that net effect of resource endowments quickly become positive when inward FDI is concerned, especially for countries that are geographically close to many other big markets. Kibaha district is located near Dar es Salaam, which provides an advantage of being near the coast in proximity to the Port of Dar es Salaam for imports and exports. The coastal Region is rich in natural resources, the most important being fisheries, forests and minerals such as kaolin. There are also tourist attractions such as Saadani Game Reserve and Selous Game Reserve, and historic sites in Bagamoyo, Miono and Utete. The region boasts of a number of rivers, notably Rufiji, Ruvu and Wami. Rufiji and Ruvu have basins that are amenable to irrigation agriculture and could be used as water supply.

Rufiji River has a particular advantage of being a great potential for generation of power at Stigler's Gorge, source of water supply and irrigation agriculture. Also, the region has institutions dealing with water ready to support investors in irrigation. Moreover in 2018, the government set aside a large area for industrial investment. This does explain the reason why there are so many investments in the manufacturing industry (14) which accounts for around 44% of all foreign direct investments in the district. Land is available at designated sites such as Zegereni, Lulanzi and other designated investment sites in every council. A number of measures have been taken to create a conducive business environment to encourage investment, the government promises to facilitate the process of land acquisition as well as other permits and regulations when needed. Moreover the government is actively looking permanent solution to electricity and water supply problems in a move to attract more investment. This is evidenced through the Rufiji Hydro Power Project. This is a 2,115 megawatts (2,836,000 hp) hydroelectric dam that as of 2022 is under construction in Pwani Region. Apart from producing enough and reliable electricity for the industrial driven economy of Tanzania, the project is associated with several investment opportunities in tourism, irrigated agriculture, fishing etc.

There are potentials for building hotels, camping sites, photographic tourism and establishment of tour companies to serve tourists visiting Selous Game Reserve and Rufiji Hydro Power

Project. Lower Rufiji being 75 km long and 13 km wide is suitable for agriculture from which 60 percent is suitable for irrigation. Crops that can be irrigated include sugar cane, paddy and horticultural crops. Rufiji River delta is also potential for fishing, especially prawns and other species. Health care facilities are fairly well established in the region at Kibaha Town (40 km from Dar es Salaam). The district as well other surrounding areas in the region have 8 Hospitals, 39 Health Centres, and 295 Dispensaries. Moreover, health care facilities in Dar es Salaam are within reach from most parts of the region. All of these played a significant role in attracting foreign direct investment in the past and most likely in the future.

Relationship between variables

A regression analysis was carried out with the aim of determining the relationship between the dependent variable (FDI Location decision) against the independent variables Land, labour , and Water and power. The findings are presented in table 3.2.

Table 3. 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.884 ^a	.781	.769	.08110	.781	4.834	.056

a. Predictors: (Constant), Land, Labour , Water and power

b. Dependent Variable: FDI Location decision

To determine the changes in the dependent variable as a result of changes in the independent variables the study used the Adjusted R square coefficient. Results of the model as presented in table 3.2 show the coefficient value of the adjusted R square was 0.769. This indicates that at 95% confidence interval changes in the independent variables water and power, Land and labour lead to a variation of 76.9% in FDI Location decision. The implication of the findings is that water and power, Land and labour account for 76.9% of the changes in FDI Location decision. From table 4.2 the value R represent the correlation coefficient, this value provide an indication of the relationship between the study variables. Observing the R coefficient value findings showed there was a strong positive relationship between the study variables at the coefficient

value of 0.884. Results from analysis of variance statistics findings show that population parameters had a 0.056 level of significance; this means that the processed data is not ideal for generating conclusions on the parameters of the population as the significance value (p-value) is not below 5%. The critical value was less than the calculated value ($2.802 < 4.834$) which indicates that water and power, Land, and labour, have a significant impact on the FDI Location decision in Tanzania. The model was statistically insignificant as indicated by a significance value of above 0.05.

Table 3. 3 Coefficients of FDI location decision and Co Factors

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.139	.853		3.678	.001
	Land	.236	.074	.198	3.189	.008
	Labour	.091	.031	.863	2.953	.060
	Water and power	.112	.028	.916	3.950	.029

Table 3.3 above illustrating the regression equation shows that holding all other factors constant except for the variables (Land, Labour, Water and power) there will be a variation of 3.139 in the FDI Location decision. The Results also indicate that holding all other variables at a constant value of zero, when Land changes upward by one unit it would result to FDI Location decision increasing by 0.236 and when Labour changes by one-unit FDI Location decision would also change by 0.091 units, Therefore, labour has positive insignificant impact on FDI Location decision. Furthermore, it was revealed that when water and power increases by one unit it leads to FDI Location decision also increasing by a unit of 0.112. Therefore, water and power have positive significant impact on FDI Location decision. However, the findings showed that in general the equation was not significant as only the variables Land and Water and power were significant ($p < 0.05$).

Conclusion and recommendations

Conclusion

Attracting investment has important implications for the development of not just Kibaha district but the country as a whole. Tanzania is endowed with plenty of investment opportunities. It has abundant natural resources and occupies a strategic geographical location in the Eastern and Central African region facilitative of trade and investments. However, low levels of industrial development, environmental concerns, lack of transparency and poor compliance with legislation are barriers to investment. Should the government implement sound investment reforms then we could benefit from foreign direct investment which could contribute to the growth of GDP and provide solution to social economic problems such as unemployment, inflation etc.

With regards to Kibaha district in particular, problems with electricity and water supply are hindering further investment from foreigners as it is rendering the place undesirable. However should the government finally be able to complete its big budget projects such as the Rufiji hydroelectric power, standard gauge railway and the Bagamoyo port then Kibaha has the potential to become the center of trade and investment due to its strategic location.

Thankfully President Samia Suluhu Hassan affirmed her commitment to prioritize economic growth and strengthen Tanzania's economy through further development of the country's mining and quarrying sector. She also stressed the need for Tanzania to increase foreign investment to encourage growth, particularly in helium, gold and nickel mining and oil extraction. This would increase the volume of foreign investment.

Recommendations

From the findings of this study, it is recommended that Land access procedures should be simplified to allow investors obtain the land they request. This study used case study design where concentration was in one particular area. Further studies could apply a different approach such as survey design in order to capture a much wider area to get results that capture a broader area.

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The effects of Trade openness, Exchange rate and Per capita income on Tax revenue collection in Tanzania: Co-integration Approach

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Abstract

Tax revenue collection is very crucial to support economic growth in any country. The general objective of this study is to examine the effects of trade openness, exchange rate and per capita income on tax revenue collection in Tanzania. This study adopted a quantitative research approach while time series research design was employed. The sample of the study incorporated the economic data from 1996-2020. This study used 25 observations which are secondary data extracted from reliable sources Tanzania Revenue Authority and World Bank. The study findings show that trade openness rises while the value of the tax revenue collection rises as well, while all other independent variables remain constant. The results show a positive long-run effect between GDP per capita and tax revenue collection, indicating that as GDP per capita increases under Ceteris Paribus, so does tax revenue collection. The results show that a positive long-run effect exists between the exchange rate and tax revenue collection; when the exchange rate increases lead to increases in tax revenue while other factors have no effect. The study presented four variables namely per capita income, trade openness, exchange rates and tax revenue collection are cointegrated and moving together in a long run towards equilibrium. The study recommends for establishment and implementation of a more workable tax structure to allow financial exchanges which will also boost tax revenue collection across the country.

Keywords: trade openness, exchange rate, per capita income, tax revenue collection, cointegration

Introduction

Background of the problem

All countries around the world are now aware that to achieve long-term economic development, they must increase domestic revenue for achieving budgetary sustainability (Bothole, 2010).

Governments used taxation as one of the domestic revenue sources to raise funds. The government levied taxation as a mandatory levy on its citizens to meet its fiscal obligations (Dritsaki & Anastassiou, 2005). Individuals and corporations pay and account for direct taxes, such as Pay as You Earn (PAYE). Indirect taxes, such as VAT, are levied on production and consumption (Vat). In developing countries, import and excise duties are the most important sources of revenue. Taxation allows the government to move funds from the private to the public sectors to pay public expenditures. Many developing countries face the challenge of over-reliance on a restricted tax base for income collection. Small revenue sources are more vulnerable to external factors, posing a significant difficulty in the tax system. As a result, tax reforms were required in developing countries in the 1980s (Haibara, 2017).

Tanzania's tax reforms began in the 1960s, with major improvements occurring in the 1970s. The rationale for the reforms was the failure of the tax system to collect enough income to fund the fast-increasing expenditure as a result of the Arusha Declaration of 1967's social-economic and political development. Revenue and equity were the primary goals of Tanzania's tax reforms in the 1960s and 1970s, but protection became a more essential goal in the 1970s (Osoro, 1995), (Bitababaje, 2020).

The goal of implementing the new sales tax Act was to counteract the decrease in import duty revenue due to the expansion of import substitution industries and to minimize rural taxation. The major reform of the 1970s was the implementation of a progressive income tax in 1973. The Act was succeeded through the 1976 Act, which boosted import duty rates and abolished excise duty in the late 1970s (Osoro, 1995).

In 1989, the government reinstated the excise charge that had been eliminated in the 1970s to simplify and rationalize the sales tax system and tax administration. On the income side, marginal tax rates were cut from 95%-75% in 1986/87 to 40% in 1990. These measures aim to increase employees' after-tax income, which has been decreasing throughout the 1990s (Alamirew Mebratu et al., 2020). The implementation of Trade Liberalization in 1984 prepared the path for private sector competition in the market, followed by the repeal of all export restrictions in 1999, which, when combined with strong macroeconomic stabilization measures, resulted in a decline in inflation. Economic recovery and substantial business growth occurred.

To compensate for the revenue tax collection deficit caused by the fiscal imbalance that arose in 1993/1994, excise duty rates were raised in 1993/1994 and 1994/1995. Domestic sales and income taxes are declining, while imports and customs levies are rapidly increasing. "Both the erosion of the total tax ratio and the increased weight of trade taxes in total revenue prompted Tanzanian authorities to postpone further tariff reductions until measures that improved tax and customs administration, reduced the scope of exemptions, and broadened the domestic tax base that was implemented" (Bitababaje, 2020)

Tanzania continues to struggle with a budget deficit year after year, despite all changes. The deficit shows a decrease in tax collection to fund government spending. "Despite substantial gains in the late 2000s, Tanzania's current level of tax receipts remains among the lowest in the world." In 2014, the government earned US\$ 6 billion in revenue, or around 12% of GDP, enough to support nearly three-quarters of government expenditure but insufficient to fund much-needed infrastructure and social service initiatives" (World Bank, 2015).

Tanzanian taxes are governed by the Income Tax Act (CAP 332 R.E 2019). Other sources of revenue for the government besides taxation include fees, fines, penalties, and dividends (Mills, 2017). Even though other sources of government revenue exist, taxation is regarded as the most important source of government revenue. In Tanzania, for example, taxation accounts for approximately 90% of overall government revenues, whereas non-taxation revenue accounts for approximately 10%. (the United Republic of Tanzania, hereafter URT 2004).

It is a source of revenue collection that contributes to the state's economic growth and helps to fund developing projects such as national infrastructure construction (Ade et al., 2018). Similarly, taxation is important to citizens since it allows for the provision of social amenities such as water facilities, the construction of schools, roads, hospitals, educational services, and electricity supply (Galbraith, 2019).

Tax reforms are expected to be a source of stimulation in enhanced good tax revenue collection performance through creating a positive response and accountability, as well as improving institutional capability. Taxation is more than just the obligation of the government and citizens; it is also about politics, power, and how authority is exercised through official and informal organizations (Fjeldstad, 2014).

Tanzania Revenue Authority has been in charge of tax collection in Tanzania since 1996. Ministry, Departments, and Agencies (MDAs), on the other hand, are in charge of collecting non-taxation revenue (URT,2004). Before the beginning of operations by TRA in 1996, the Ministry of Finance was in charge of tax collection. The TRA was established in 1995 by Act of Parliament No. II of 1995. Tanzania's revenue authority is comprised of four primary departments: Customs and Excise, Domestic Revenue, Large Taxpayers, and Tax Investigations. One of the objectives of establishing TRA was to increase revenue collection by strengthening tax administration, and tax assessment, and making taxation simple to understand to encourage voluntary compliance (URT, 2004). There are two types of tax compliance: voluntary tax compliance and involuntary tax compliance (Mengistu, 2018).

According to Fjedstad (1995), tax reforms are implemented to increase tax revenue collection to make the government self-sufficient by collecting adequate sums to sustain its budget. Tax reform can reduce revenue avoidance and evasion, improving tax collection for funding public goods and services. Tanzania's tax reforms were implemented to address a significant fiscal problem. Due to the crisis, tax reform aims were to make the government self-sufficient by collecting enough money to fund the budget and leaving them with a surplus over and above the previous period's deficit.

Budget deficits exist in developing countries because tax collection does not balance budget expenditure. Several studies have been conducted in response to changes in tax income and GDP by Wawire (2011), Muriithi and Mooyi (2003) and Gupta (2007). These studies found a positive association between tax revenue and GDP, however the removal of critical problems on tax revenue determinants such as tax base, trade openness, per capita income, change in the exchange rate, and other factors impacting tax revenue.

Stotsky and Woldemariam (2007) conducted research in Sub-Saharan African countries on tax initiatives, which revealed that many Sub-Saharan African countries experience problems in obtaining tax money for public purposes. The purpose of the study was to determine the factors of the tax portion of GDP and to develop a measure of tax efforts. Nagy (2000) found that tax revenue performance differs across Arab countries, with some countries experiencing continuous increases in tax revenue shares in recent years while others experiencing a decline in tax revenue shares.

Tax revenue collection is critical to encouraging long-term economic development not only in wealthy countries but also in developing countries (Bitababaje, 2020). Tanzania, like other developing countries, struggles to provide social services to its citizens (Mengistie, 2018). Even though the government of the United Republic of Tanzania (URT) and many African countries implemented dramatic reforms in revenue collection, the performance of revenue collection remains inefficient, necessitating reliance on loans and grants to support deficit budgets (Mtasiwa, 2013).

Previous research on the determinants of tax revenue collection in Tanzania, Kenya, Ethiopia, and Rwanda found that the tax base, per capita income, and exchange rate all have an impact on revenue collection (Nyabange, 2017); Bitababaje, 2020; Aloo, 2012; Mengistie, 2018). According to Keynes, (1935), per capita income, and exchange rate are tools for adapting and increasing revenue collection; in connection with this Keynesian theory, there is a positive effect between tax base, per capita income, trade openness, tax rate change, and revenue collection.

Tanzania's tax-to-GDP ratio, in particular, has shown a consistent decrease from 13.6% (2015/16) to 12.9% (2019/20), with reasons cited as poor utilization of government resources, poor follow-up on the tax debt, and poor tax policy regarding tax base (NAOT, 2020); (OECD, 2019); (African Economic Outlook, 2015). (Ministry of Finance and Planning - Tanzania, 2020). If this trend continues, the nation's economy will be severely harmed. As a result, the study intends to investigate the effect of Trade openness, exchange rate and per capita income on tax revenue collection.

Methods

Research Approach

In this study, we adopt a quantitative technique to examine the effects between variables. These variables are measured and analysed using statistical procedures. The time data are employed and assumptions about testing and being able to generalise and reproduce the findings.

Research Design

The study used a time series design. A time series study design explores the effect between variables over equal periods, with time being a significant aspect.

Time series research designs make advantage of accessible secondary data, and because secondary data was available, the researcher chose a time series approach. Understanding the past and predicting the future are two advantages of employing time series design.

Research Area.

The investigation of the effect between the dependent variable tax revenue collection and the independent variables trade openness, tax base, per capita income, and tax rate change. The study was done primarily in the United Republic of Tanzania, with its Gross Domestic Product serving as the study region. With information from the Tanzania Revenue Authority and the World Bank.

Sampling Procedures

The sample procedures for this study span 25 years, from 1996 to 2020. Data for per capita income, trade openness, exchange rate, and tax revenue were collected; tax revenue data were obtained from the Tanzania Revenue Authority (TRA) website; per capita income, trade openness, and change in the exchange rate were obtained from the World Bank (WB). This study will be carried out in Tanzania. Tanzania was chosen as a research area because the tax revenue collection rate is insufficient to meet state expenditure and because trustworthy data from credible sources is available.

Sample Size

The sample size of the study is 25 observations involve from 1996 to 2020 from TRA, BOT, WB and IMF. Which consisted of 25 years of business and the selection criterion is based on data available from data sources like TRA, BOT and World Bank.

Model Specification

The econometric technique used to test the effects which exist between the dependent variable and independent variables will be the Multiple Linear Regression Model because it is an economic model used in predicting the value of a variable base on the value of other two or more variables.

The following are tax revenue equations;

$$T_t = f(TO, PI, ER) \dots \dots \dots (i)$$

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Whereby: $GDPT_t$ = Tax revenue collection; TO = Trade Openness;
 PI = Per Capita Income; ER = Exchange rate

$$T_t = \alpha + \beta_1 TO_t + \beta_2 PI_t + \beta_3 ER_t + \varepsilon_t \dots \dots \dots (ii)$$

Whereby: $GDPT_t$ = Tax revenue collection; TO = Trade Openness;
 PI = Per Capita Income; ER = Exchange Rate ; α = Constant; β_1, β_2 , and β_3 are coefficients; ε is the error term, t is year, α is a level of significance of 95%.

Results

Basic Descriptive Statistics

The study's primary data features are reported using descriptive statistics. Descriptive statistics facilitate a clear and intelligible display of massive amounts of data. In addition, descriptive or summary statistics indicate the nature of the data distribution through the use of kurtosis and skewness, as well as whether it is suitable for conducting data transformations by using natural logarithms or not. This study employed yearly time series data from 1996 to 2020, a span of twenty-five years. The study's independent variables are trade openness, per capita income, and the exchange rate. Table 4.1 summarizes and illustrates the descriptive statistics finding.

Table 4. 1: Show Descriptive Statistics for Tax revenue, trade openness, per capita income, and exchange rate

DESCRIPTIVE STATISTICS	TAX_REVENUE COLLECTION	TRADE_OPENNES S	PER_CAPIT A INCOME	EXCHANG E RATE
Mean	6,341,903.	38.57584	672.8044	1381.36
Median	4,105,910.	36.95927	687.3904	1251.90
Maximum	17,922,519	56.16612	1085.885	2294.14
Minimum	523,301.4	23.98087	219.5502	579.976
Std. Dev.	6,073,775.	9.798519	284.3348	562.848
Skewness	0.746739	0.172920	0.092101	0.355
Kurtosis	2.081521	1.775733	1.54311	1.932

Observations	25	25	25	25

Source: EViews output (2022)

Table 4.1 displays summary statistics for all variables, both dependent and independent variables, as well as central tendencies such as mean, median, and average, as well as maximum and lowest values for the data set. Dispersion metrics were also included, such as standard deviation, which illustrates how far each data set is from the average mean value of each variable. The dataset for all the variables depicts that there are no outliers in the data as the Std. Dev is small than the mean for all the variables as shown in table 4.1 above. This shows how the data set spreads from the mean.

The normality of the dataset was demonstrated, and the results focus on skewness, which assesses the degree of asymmetry of the series. The data set appears to be normally skewed, as the skew value for each variable approach zero. The kurtosis of the data is also detected, since all variables have a kurtosis value less than 3, indicating that the data is Platykurtic. Therefore, the results show that the dataset is normally distributed.

Lag Order Selection Criteria

Before evaluating the distributed autoregressive lag (ADRL) model or vector error correction model first a lag selection initially employed criterion. Some criteria apply when you want to make a selection of how many numbers the lag criterion was used in determining the maximum of lag: Akaike Information Criterion, Schwarz Bayesian Information Criterion and Hannan and Quinn Information Criterion. Akaike Information Criterion and Schwarz Bayesian Information Criterion were given priority as shown in Table 4.2

Table 4. 2: VAR Lag Order Selection Criteria

Lag	AIC	SBIC	HQIC
0	63.74234	63.93982	63.79201
1	54.72280	55.71018*	54.97112*
2	54.71921*	56.49651	55.16620

Source: EViews 10 output (2022)

Table 4.2 clearly shows the optimal lag length for the four variables Tax revenue collection, Trade openness, per capita GDP and exchange rate by using AIC and SBIC, the applied criterion is to look at the lowest AIC and SBIC. This gives the optimal best lag to use. The results show an AIC of 54.7191, which is in a second lag.

Unit Root Test or Stationarity Test Results

For time series data, the unit root or stationarity test was used. This test is used to assess whether the data in the time series and the sequence in which the variables are integrated are stationary or non-stationary. A time series data, on the other hand, is said to be non-stationary if both the variance and the mean are not constant with time. Because nonstationary variables generate feeble or meaningless results due to the trend in the data series, the unit root test is required.

According to Dickey and Fuller, the testing of unit roots is the initial process in the creation of a time series model (1979). The Dickey-Fuller Augmented (ADF) test is a common method for determining whether or not a series has a root unit. According, to the ADF criterion, is known for its limited test power (Chin et.al, 2008).

Given that the ADF test is frequently chastised for its limited potency. Stationarity can also be confirmed using the Autocorrelation Function (ACF) and the Partial Autocorrelation Function (PACF) (PACF).

To test for time series data stationarity firstly it must be tested for unit root at level; if the time series data is not stationarity at level, The difference of time series data till it becomes stationary. The confirmation of stationarity using ADF or Philips Perron, for example, at 10%, 5%, or 1% statistical significance levels, with three options for constant and trends, constant only, or none. The Null Hypothesis (H_0) states that "the variables are neither stationary nor have a unit root," while the Alternative Hypothesis (H_1) states that "the variables possessed stationarity/had no unit root."

Stationarity/unit root test for tax revenue collection

Null Hypothesis: TAX REVENUE COLLECTION has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on AIC, maxlag=2)

Table 4. 3: Non-stationarity test at level

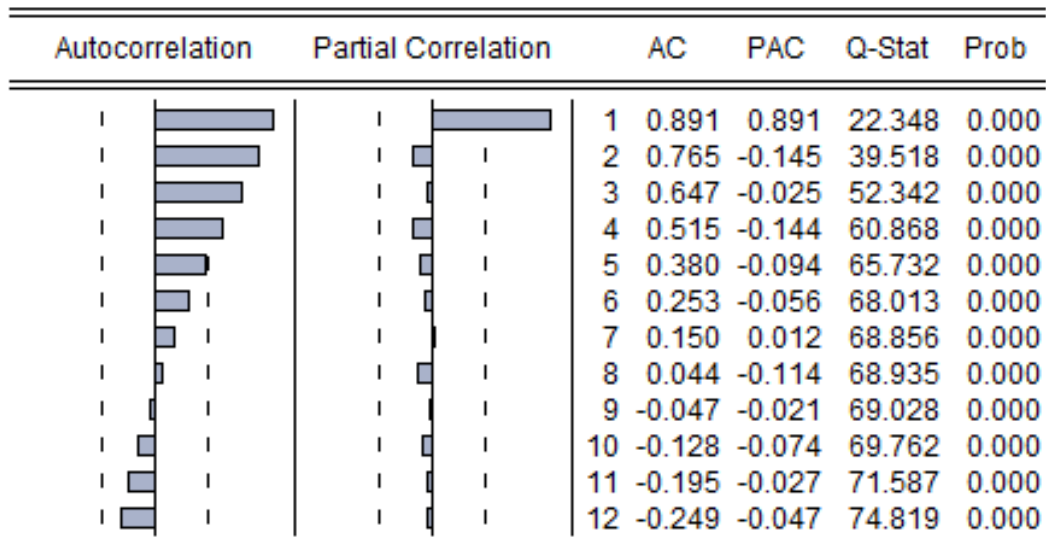
	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.516639	0.7950
Test critical values:		
1% level	-4.394309	
5% level	-3.612199	
10% level	-3.243079	

Source: EViews 10 output (2022)

Non-stationarity Test at level

Table 4.3 reveals that the p-value is 0.7950 more than the 0.05 significant level when employing the ADF test for the unit root test, indicating that the null hypothesis H_0 is accepted in favour of H_1 , indicating that the Tax revenue series is nonstationary or has a unit root. As a result, differencing the series was required to obtain a stationary series.

Figure 4. 1: Correlogram at Level



Source: EViews 10 output (2022)

The series shows spikes outside the confidence bounds shown by the dotted line, whereas for a stationary time series, the ACF and PACF spikes should lie within the confidence bounds. Based

on the stated grounds, the series is nonstationary at levels, which means that its statistics and variances may change with time.

Stationarity at first difference

Null Hypothesis: D (TAX REVENUE COLLECTION) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on AIC, maxlag=2)

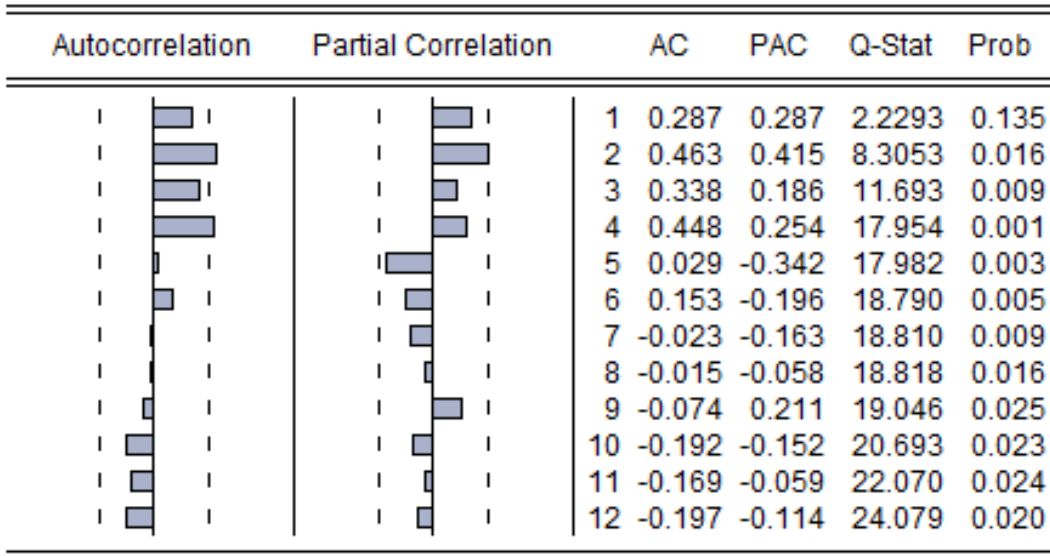
Table 4. 4: Stationarity at first Difference

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.219335	0.0018
Test critical values:		
1% level	-4.416345	
5% level	-3.622033	
10% level	-3.248592	

Source: EViews 10 output (2022)

According to the results in table 4.4, the ADF test for the unit root is 0.0018, which is less than the 0.05 significant level. This demonstrates that the tax revenue series is stationary at the first difference. As a result, the null hypothesis is rejected in favour of the alternative hypothesis that the series is stationary at the first difference I. (1).

Figure 4. 2: correlogram



Source: EViews 10 output (2022)

Figure 4.2 for the correlogram clearly shows that all the bars are inside the confidence bounds, implying that the Tax revenue collection series is stationary at I (1).

Stationarity test for per capita GDP

Non-stationarity at level

Null Hypothesis: PERCAPITAGDP has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on AIC, maxlag=2)

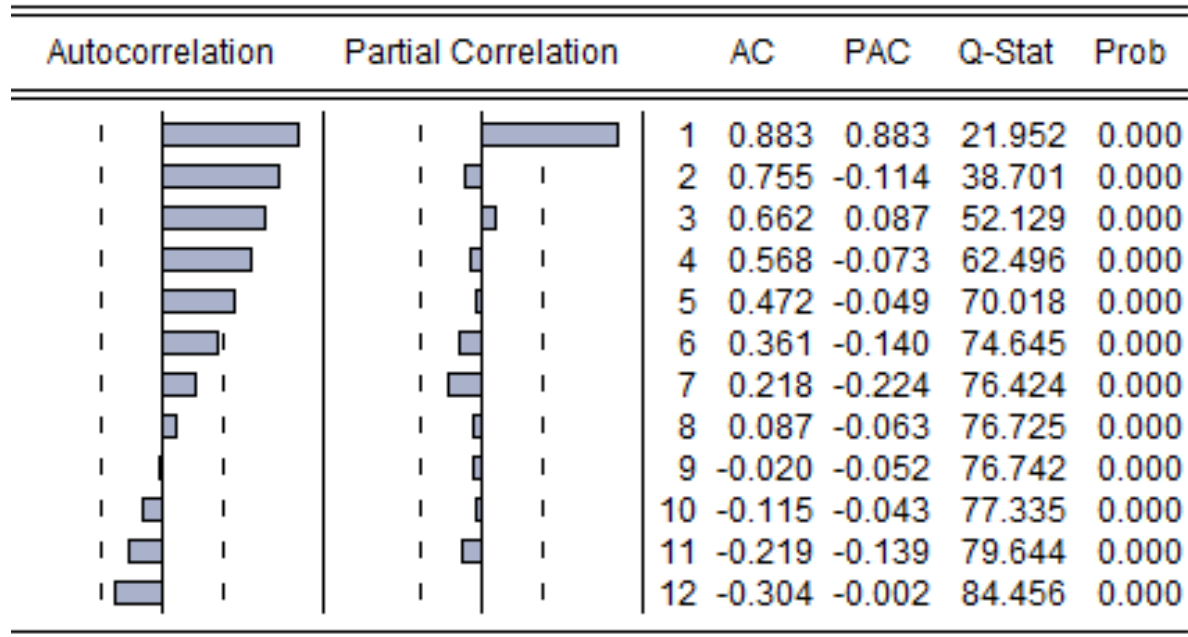
Table 4. 5 : Non-stationarity at level

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.175098	0.4801
Test critical values: 1% level	-4.416345	
5% level	-3.622033	
10% level	-3.248592	

Source: EViews 10 output (2022)

Table 4.5 shows that the probability values for the per capita of GDP are 0.4801, which is more than the statistical significance level of 5%, and the null hypothesis is accepted that the series is nonstationary at the level I. (0). Similarly, the correlogram shows that certain bars are outside the confidence bound, as illustrated below.

Figure4.3:Autocorrelation



Source: EViews 10 output (2022)

Stationarity at first difference

Null Hypothesis: D(PERCAPITAGDP) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on AIC, maxlag=2)

Table 4. 6: Stationarity at first difference

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.159957	0.0171
Test critical values:	1% level	-4.416345
	5% level	-3.622033

10% level

-3.248592

Source: EViews 10 output (2022)

Table 4.4 The ADF test for the unit root shows that the probability values for GDP per capita are 0.0171, which is less than the statistical significance level of 5%, so the null hypothesis is rejected that the series is nonstationary at the level I(1) and accept the H(1) that GDP per capita is stationary at the level I(1) (1). Similarly, as illustrated in Figure 4.7, the correlogram demonstrates that some bars are within the confidence bound. Figure 4.7.

Table 4. 7:The ADF test for the unit root

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob	
		1	0.054	0.054	0.0804	0.777
		2	-0.190	-0.193	1.0998	0.577
		3	-0.161	-0.143	1.8653	0.601
		4	-0.005	-0.028	1.8662	0.760
		5	0.181	0.134	2.9457	0.708
		6	0.025	-0.016	2.9682	0.813
		7	-0.358	-0.334	7.6704	0.363
		8	-0.312	-0.297	11.475	0.176
		9	0.071	-0.034	11.688	0.232
		10	0.162	-0.035	12.864	0.231
		11	-0.097	-0.261	13.314	0.273
		12	-0.106	-0.097	13.897	0.307

Source: EViews 10 output (2022)

Stationarity Test for Trade Openness

Non-stationarity at level

Null Hypothesis: TRADE_OPENESS has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on AIC, maxlag=2)

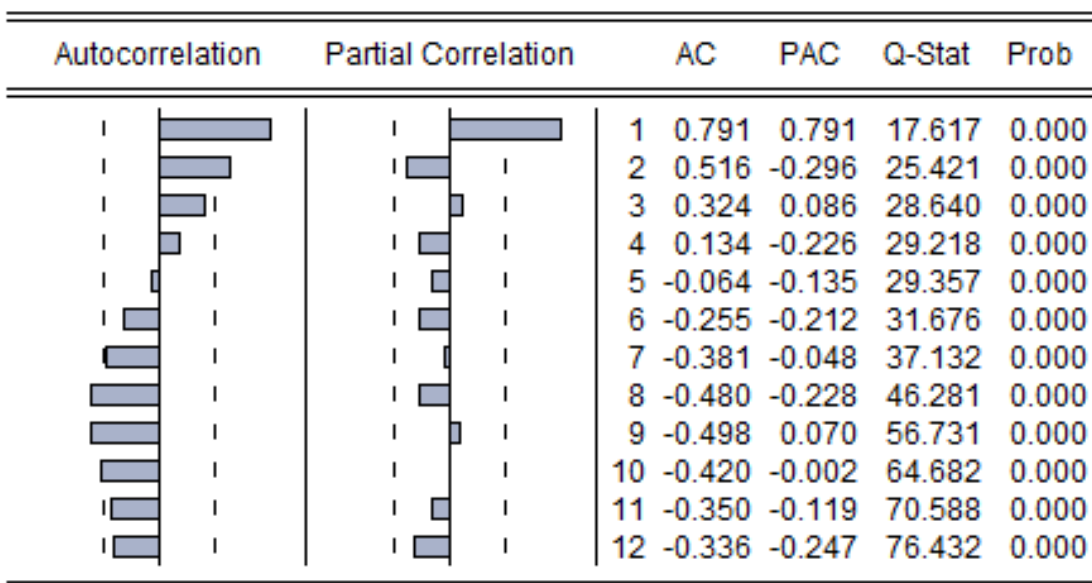
Table 4. 8: Non stationarity at Level

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.890853	0.6266
Test critical values:	1% level	-4.416345	
	5% level	-3.622033	
	10% level	-3.248592	

Source: EViews output (2022)

According to Table 4.4, the ADF test for the unit root indicates that the probability values for the Trade openness are 0.6266, which is greater than the statistical significance level of 5%, and thus the null hypothesis is accepted based on the contention that the series is nonstationary at the level I. (0). Similarly, as seen in, the correlogram demonstrates that certain bars are outside the confidence bound in Figure 4.4 below.

Figure4.4:TheADF test for the unit root



Source: EViews output 2022

Stationarity at first difference

Null Hypothesis: D(TRADE_OPENESS) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on AIC, maxlag=2)

Table 4. 9: The ADF test for the unit root

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.039782	0.0460
Test critical values: 1% level	-3.752946	
5% level	-2.998064	
10% level	-2.638752	

Source: EViews 10 output (2022)

Table 4.9 shows that the ADF test for the unit root indicates that the probability values for GDP per capita are 0.0062, which is less than the statistical significance level of 5%, and thus the null hypothesis is rejected that the series is nonstationary at the level I (1) and accept the H (1) that trade openness is stationary at the level I (1) (1). As illustrated in Figure 4.6, the correlogram demonstrates that certain bars are within the confidence bound.

Figure 4. 5: Stationarity at first difference

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob	
		1	0.452	0.452	5.5366	0.019
		2	0.030	-0.219	5.5622	0.062
		3	0.012	0.124	5.5666	0.135
		4	0.101	0.062	5.8864	0.208
		5	-0.022	-0.144	5.9020	0.316
		6	-0.133	-0.047	6.5117	0.368
		7	-0.091	-0.004	6.8147	0.448
		8	-0.241	-0.317	9.0813	0.335
		9	-0.348	-0.121	14.112	0.118
		10	-0.208	0.018	16.033	0.099
		11	0.012	0.039	16.039	0.140
		12	-0.130	-0.242	16.921	0.153

Source: EViews 10 output (2022)

Stationarity test for exchange rate

Non-stationarity at level

Augmented Dickey-Fuller

Null Hypothesis: EXCHANGE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on AIC, maxlag=2)

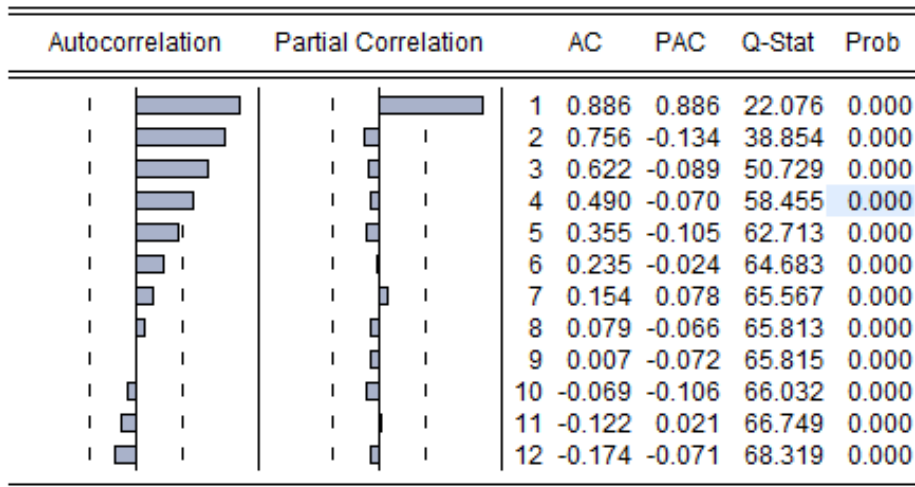
Table 4. 10 : Non stationarity at level

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.405434	0.3673
Test critical values:		
1% level	-4.416345	
5% level	-3.622033	
10% level	-3.248592	

Source: EViews 10 output (2022)

According to Table 4.8, the ADF test for the unit root indicates that the probability values for the exchange rate are 0.3673, which is more than the statistical significance level of 5%, and the null hypothesis is accepted that the series is nonstationary at the level I. (0). Similarly, as illustrated in Figure 4.7, the correlogram demonstrates that some bars are outside the confidence bound.

Figure 4. 6: Non-stationarity at level



Source: EViews 10 output (2022)

Stationarity at first difference

Null Hypothesis: D(EXCHANGE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on AIC, maxlag=2)

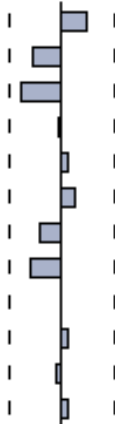
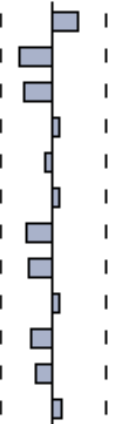
Table 4. 11: Stationarity at first difference

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.690673	0.0115
Test critical values:		
1% level	-3.752946	
5% level	-2.998064	
10% level	-2.638752	

Source: EViews 10 output (2022)

Table 4.11 shows that the ADF test for the unit root indicates that the probability value for the exchange rate is **0.0115** which is less than the statistical significance level of 5%, and in that regard, the null hypothesis is rejected that the series is non-stationary at the level I (1), and accept the H (1) that the exchange rate is stationary at I (1). Similarly, the correlogram indicates that some bars lie inside the confidence bound as shown in Figure 4.7 below.

Figure 4. 7: The correlogram indicates

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
		1 0.197	0.197	1.0484	0.306
		2 -0.211	-0.260	2.3144	0.314
		3 -0.305	-0.225	5.0825	0.166
		4 -0.015	0.051	5.0897	0.278
		5 0.061	-0.065	5.2117	0.391
		6 0.104	0.047	5.5885	0.471
		7 -0.157	-0.203	6.4920	0.484
		8 -0.240	-0.180	8.7309	0.366
		9 -0.001	0.058	8.7310	0.462
		10 0.044	-0.172	8.8170	0.550
		11 -0.028	-0.129	8.8552	0.635
		12 0.052	0.082	8.9965	0.703

Source: EViews 10 output (2022)

In general, all of the variables fail to be stationary at the first level, which allows us to test the stationary at the first level by varying the variables, both independent and dependent variables. The initial change caused the variables to be stationary, which meets the assumptions of time series data.

Johansen Cointegration Test

The Johansen method is used to test co-integrations and is superior to the Engle-Granger method in that it allows for the testing of many co-integrating vectors (Verbeek,2004). According to some theories, econometric analysis with non-stationary variables makes no sense. The lone exception is when a regression of one nonstationary variable produces a stationery series, in which case it is referred to be co integrating regression. The Johansen technique was used to do a

cointegration test to see whether the variables had a long-run effect. The cointegration test is used after a stationery check and determining the optimal lag length of variables.

The zero hypothesis H_0 : There is no cointegration, whereas Alternative Hypothesis H_1 : Cointegration exists.

The trace statistic and the Maximum Eigen statistic are used by the Johansen Cointegration procedures to establish whether there is a long-run link between the variables. Both the trace test and the maximum Eigenvalue test in this study show the presence of one co-integrating vector at the 5% critical value. When the Trace statistic is greater than the crucial values at the 5% significant level, it is accepted that the variables have a long-run effect; otherwise, there is no long-run effect among the variables in a linear pattern.

Trace statistic

Table 4. 12: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Trace Statistic	0.05 Critical Value	Prob.**
None *	114.9876	47.85613	0.0000
At most 1 *	42.06632	29.79707	0.0012
At most 2 *	19.91554	15.49471	0.0101

Source: Authors estimate EViews 10 output (2022)

Hypotheses:

H_0 : No co-integrating vectors between the variables

H_1 : There are Co-integration vectors between the variables

Table 4.12 shows that the trace statistic for all postulated cointegrating equations is more than the critical value, and the probability value for each is less than 0.05. The Null hypothesis H_0 is rejected in favour of the Alternative hypothesis of cointegration. These findings suggest that there is cointegration between the four variables of tax revenue, trade openness, exchange rate, and GDP per capita income. The four variables are cointegrated and tend towards equilibrium in the long run.

Maximum eigenvalue statistic

Table 4. 13: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	72.92132	27.58434	0.0000
At most 1 *	22.15078	21.13162	0.0358
At most 2	13.09207	14.26460	0.0760
At most 3 *	6.823463	3.841466	0.0090

Source: Authors estimate EViews 10 output (2022)

According to Table 4.13, the Max Eigen statistic for the hypothesized number of Cointegrating Equations (CE) is none, at most one, and at most three with Max Eigenvalues more than the critical value and corresponding probability values less than 5% significant level. The max Eigen value for at most 2 has failed to meet the criteria for cointegration since it is less than the crucial value of 14.264. The test suggests that there are three integrating equations. As a result, accept the alternative hypothesis of cointegration and reject the null hypothesis.

The findings are similar to those reported by other scholars such as (Dritsaki & Anastassiou, 2005), who examined the effect between tax revenues and the rate of economic growth in Greece using annual time series data and concluded that there was a causality effect between tax revenue and economic growth in the long run. Furthermore, the study does not agree with some scholars who have conducted similar research on the causal effect between tax revenue and government expenditure.

The study conducted by (Hussain, n.d.) suggests a unidirectional effect between tax revenue collection and government expenditure in Pakistan, using annual time series data.

Diagnostics Test

Before drawing any conclusions from the estimation findings, a variety of diagnostic tests were undertaken to confirm that the models were statistically sound and that could be used for forecasting (D.N. Gujarat, 2011; Hanck et al, 2019; Hill al, 2018) As a result, the following diagnostic tests were run to ensure that the empirical models were statistically sound and that the assumptions of the classical linear regression model (CLRM) were not violated: The Jarque-

Berra (J-B) test was used first to determine whether the residuals were normally distributed, followed by Breusch-Godfrey LM tests to compute the Lagrange multiplier (LM) to assess for serial autocorrelation, the Heteroskedasticity test, and finally CUSUM tests and CUSUM of square tests to determine model stability.

Breusch-Godfrey LM test for autocorrelation

The Breusch-Godfrey serial correlation test was utilized to evaluate whether the error terms were serially associated. The null hypothesis for the serial correlation test is that there is no serial correlation, whereas the alternative hypothesis is that the error terms are autocorrelated. At 5% significance,

Table 4. 14: Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.846814	Prob. F (2,12)	0.1999
Obs*R-squared	5.413244	Prob. Chi-Square (2)	0.0668

Source: Author's estimates EViews 10 output (2022)

Hypothesis: Ho: There is no serial correlation

:H1: There is a serial correlation

Table 4.14 shows that R squared corresponds to a probability value of 0.0668, which is more than the 5% significant level. The acceptance of null hypothesis Ho is that the model has no serial correlation, hence the provided model does not have a serial correlation. This is a good indication that the model is accurate because present values at time t have no association with historical values of the variables (t-1) over the periods.

Heteroskedasticity test and ARCH effects

Table 4. 15: Heteroskedasticity Test: ARCH

F-statistic	0.004446	Prob. F(1,20)	0.9475
Obs*R-squared	0.004889	Prob. Chi-Square(1)	0.9443

Source: Author's estimates EViews 10 output (2022)

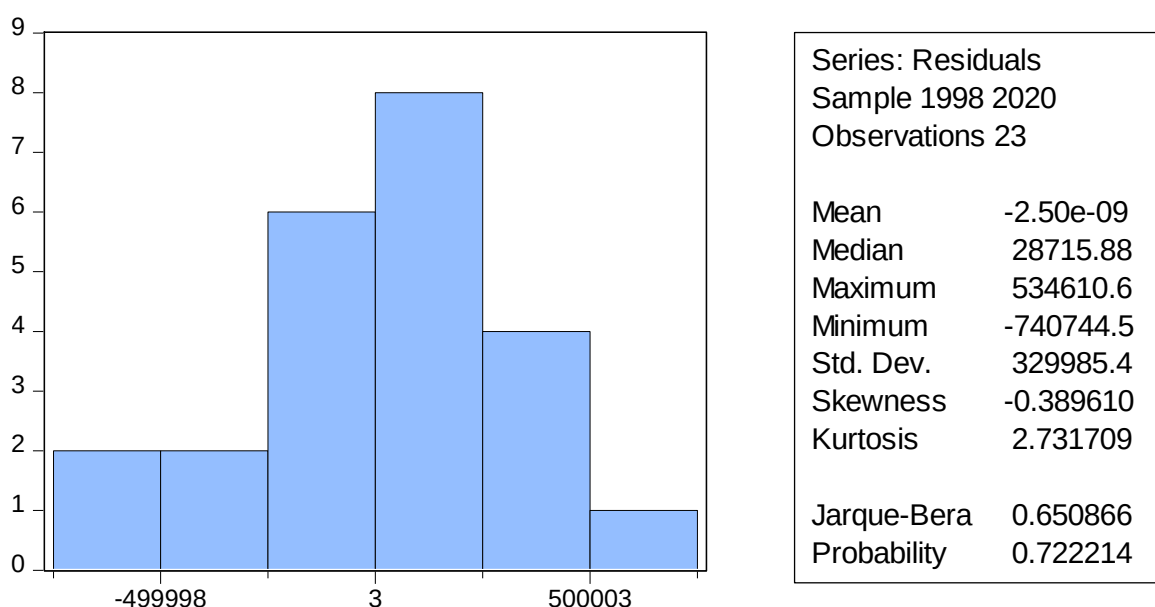
Hypothesis: Ho: The model is free Heteroscedastic ARC effect

:H1: The model isn't free Heteroscedastic ARC effect

Table 4.15 indicates that the observed R squared has 94.4% which is greater than the significant level of 5%. The d test decision is to accept the Ho and reject the H1, that the model is free from Heteroskedasticity ARCH effects.

Test for normality test

Figure 4. 8: Normality Test



Source: Author's estimates EViews 10 output (2022)

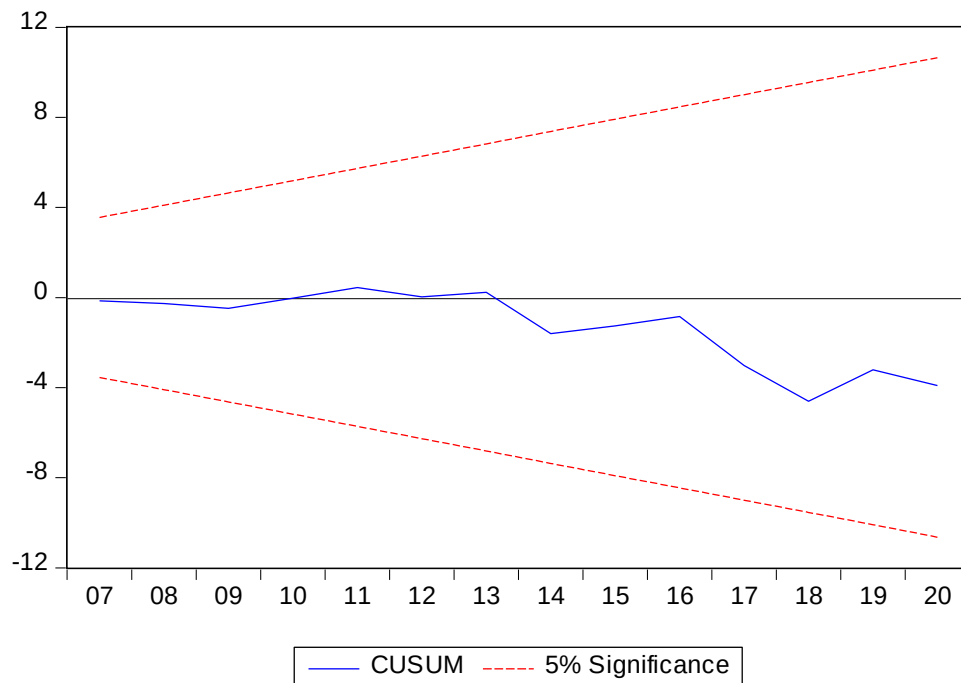
Hypothesis: Ho: The model is not normally distributed

:H1: The model is normally distributed

The normal curve is well depicted in Figure 4.8 by utilizing Jarque Bera with a probability of 72.22%, which is greater than the 5% significance threshold. As a result, all variables under consideration are regularly distributed. As a result, we reject Ho in favour of H1, which states that the model is regularly distributed.

Stability test

Figure 4. 9: Stability Test



Source: Author's estimates EViews 10 output (2022)

Hypothesis Ho: The model is not stable

H1: The model stable

Figure 4.9 shows that the blue line lies between the 5% confidence limits significance level, indicating that the model is stable; however, if the blue line lies outside the 5% confidence bounds significance level, the model is poor. As a result, we reject Ho in favour of H1, which states that the model is stable within a confidence level of 5%.

Vector error correction model (VECM)

VECM provides numerous vector equations for all variables, with tax revenue collection being the dependent variable and other variables such as trade openness, GDP per capita income, and exchange rate being independent. Switching the other variables to dependent variables allows you to see the effect of each other independent variable on the dependent variable which shows the causal long-run and short-run effect.

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The dependent variable in our situation is tax revenue collection, while the other variables are independent. As a result, this equation estimates the long-run and short-run impact of independent variables (trade openness, exchange rate, and per capita income) on the dependent variable (Tax revenue collection).

Table 4.8: Vector Error Correction Description

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.0336	0.0103	3.2647	0.0068
C(2)	-0.712	0.2799	-2.546	0.0256
C(3)	-0.295	0.2769	-1.068	0.3064
C(4)	-0.153	0.1931	-0.793	0.4430
C(5)	-0.111	0.1726	-0.646	0.5303
C(6)	-0.404	0.2698	-1.498	0.1599
C(7)	-0.168	0.2207	-0.764	0.4595
C(8)	-0.233	0.4563	-0.512	0.6177
C(9)	-0.024	0.3239	-0.075	0.9410
C(10)	0.3583	0.1023	3.5010	0.0044
R-squared	0.7296	Mean dependent var		0.1513
Adjusted R-squared	0.526867	S.D. dependent var		0.0717
S.E. of regression	0.049334	Akaike info criterion		-2.877
Sum squared resid	0.029206	Schwarz criterion		-2.381
Log likelihood	41.65191	Hannan-Quinn criter.		-2.760
F-statistic	3.598335	Durbin-Watson stat		1.7691
Prob(F-statistic)	0.021184			

Source: Author's estimates EViews 10 output (2022)

Where,

C (1): Long run coefficient of the variables

C (2)-C (9): Short run coefficient of the variables

C (10): Constant

Table 4.18 shows the long-run and short-run effects between the dependent variable and independent variables. Table 4.18 shows that the Error Correction Term (ECT) is $C(1) = 0.033693$, which is a good sign for adjustment to the equilibrium representing 3.37%, indicating that the model will be adjusted by 3.37% in the long run and is statistically significant with a probability value of 0.0068. Similarly, $C(2)$ to $C(9)$ are the short-run coefficients indicating the model's shocks, the coefficients are -0.712, -0.295, -0.153, -0.111, -0.404, -0.168, -0.233, and -0.024 respectively while $C(10) = -0.358$ is a constant. Furthermore, R squared and Adjusted R squares is about 72.9% and 52.6% respectively, and the F statistic is $0.0211 < 5\%$ significant level.

Discussion of the findings

The long-run and short-run effects of trade openness on tax revenue collection

Table 4.18 clearly shows that there is a positive effect between trade openness and tax revenue collection by 0.0336 while holding other independent variables constant which is statistically significant with a p-value of $0.0068 < 5\%$ level of significance. However, in the short run, the model depicts the negative effect in all the coefficients, but the effect is not statistically significant from $C(3)$ to $C(9)$ i.e. -0.295, -0.153, -0.111, -0.404, -0.168, -0.233, and -0.024 respectively. This means that in the short run trade openness and Tax revenue collection reveal a negative effect which is not statistically significant while other variables are kept constant.

The long-run and short-run effects of Per capita income on tax revenue collection

Table 4.18 clearly shows that there is a positive effect between Per capita income and tax revenue collection by 0.0336 while holding other independent variables constant (trade openness and exchange rate), which is statistically significant with a p-value of $0.0068 < 5\%$ level of significance. However, in the short run, the model depicts the negative effect in all the coefficients, but the effect is not statistically significant from $C(3)$ to $C(9)$ i.e. -0.295, -0.153, -0.111, -0.404, -0.168, -0.233, and -0.024 respectively. This means that in the short run the Per capita income and Tax revenue collection reveal the negative effect which is not statistically significant while other variables are kept constant.

The long-run and short-run effects of exchange rate on tax revenue collection

Table 4.18 clearly shows that there is a positive effect between exchange rate income and tax revenue collection by 0.0336 while holding other independent variables constant (trade openness and Per capita income), which is statistically significant with a p-value of $0.0068 < 5\%$ level of significance. However, in the short run, the model depicts the negative effect in all the coefficients, but the effect is not statistically significant from C(3) to C(9) i.e -0.295, -0.153, -0.111, -0.404, -0.168, -0.233, and -0.024 respectively. This means that in the short run the exchange rate and Tax revenue collection reveal a negative effect which is not statistically significant while other variables are kept constant.

The study concurs with the studies done by (Epaphra & Kaaya, n.d.) on the impact of tax revenue on sectoral growth and public expenditure in Tanzania, and the results showed that there is long-run and short-run effect among the variables. Similarly, other studies are in line with the study, the study on “Dynamics of Revenue Generation in Tanzania, Kenya and Uganda: A Co-integration and error-correction modelling approach” has been done and the results stipulate that there is a reciprocal long run and short run impacts among the countries, the positive impact of the growth of the manufacturing and agricultural sector on revenue generation in Tanzania and Kenya can be contrasted to negative impacts in Uganda. On the same ground the study results that assess how the determinants of tax revenues effects the tax performances in Tanzania done by S. Simbachawene, (2018) also are in line with our results. Generally, related results concur with our study that there is a long-run effect between the studied variables which are statistically significant, whilst the short-run effects do exist with mostly negative relation but are not statistically significant.

Conclusion

According to the findings of this study, taxes revenue remains the single largest source of government revenue in Tanzania. Taxation has contributed 95% of overall government revenue over the last twenty-five years. Direct and indirect taxes represent a bigger proportion of total tax collections. Among the noble ones that appear to have had beneficial effects on tax revenue are per capita income, trade openness, and exchange rate. The statistic for all of the postulated cointegrating equations is more than the critical value, and the probability value for each is less than 0.05, according to this study. These findings suggest that there is cointegration between the four variables of tax revenue, trade openness, exchange rate, and GDP per capita income. The

four variables, namely per capita income, trade openness, exchange rates, and tax revenue collection, are cointegrated and tend towards equilibrium in the long run. However, in the short run, the variables are inversely connected. As a result, per capita income, tax rate changes, and trade openness are the factors of tax revenue collection in Tanzania.

Recommendations

There should be the establishment and implementation of a more workable tax structure to allow financial exchanges which will also boost tax revenue collection across the country. The emphasis must base on the tax structure which is relevant to the increase in revenue collection to finance government expenditure. Government is responsible to allow an improved tax structure which is needed to improve financial exchange at the advantage of the Tanzania government.

The government need to ensure a more convenient environment for import and exports so that more of them could be undertaken and thus increasing the GDP. The environment for the advancement of GDP is related to export and import transaction. The need for improved export and import transaction is specifically based on the improvement of GDP.

Change in tax rate should also be regulated to increase the value of the Tanzania shilling and thus could have an impact on the revenue collection. The change in tax rate is related to the increase in the money value because an increase in tax rate means more tax money. The specific increase in tax rate or change for the increasing rate specifically is needed to increase tax revenue and hence increase GDP.

An increase in tax revenue can be achieved if taxable capacity is substantially expanded through increased economic activities. The tax revenue needs to be improved through an increase in Tax rate which must be directly related to the change in economic activities. The increase in tax rate is directly related to an increase in economic activities that could lead to an increase in revenue collection.

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Factors that Influence Voluntary Tax Compliance in Zanzibar: A Case Of Zanzibar Revenue Board and Tanzania Revenue Authority

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Abstract

The purpose of the study was to examine the factors that influence voluntary tax compliance in Zanzibar. This study employed a cross sectional research design so as to explore insights into the different issues as they exist in Zanzibar regarding voluntary tax compliance. The design included the exploration/investigation of the factors that influence compliance to tax payments. Because the study was quantitative in nature, the approach inferred the characteristics of the population from the sample characteristics, and general information about the findings is provided based on the sample investigated. The study used a non-probabilistic sampling technique, more specifically, random sampling, which was chosen since the researcher concentrated on Zanzibar's taxpayers and tax officials, with knowledge of factors that may be used to improve voluntary compliance. The study sample was selected from Zanzibar taxpayers and some ZRB officials, and consisted of 200 respondents. The study used mixed research methods to test the hypotheses in meeting stated objectives. Data were collected through survey questionnaire, interview and the review of documents. The results of the study revealed that the majority of customers complains the Tax rate is high, the majority of customers were not registered to ZRB, both registered and unregistered clients have low awareness of tax laws, there is a weak block system administration in Zanzibar and the integrity and professionalism of ZRB staff significantly affects the compliance of clients.

Keywords: Credit risk management practices, Commercial bank, Bank Financial Performance

Statement of the Problem

Tax evasion reduces government revenue and limits the government's ability to expand national programs. As a result, there may be additional tax burdens (Hope, 1993). According to (Silvani, 1992), the purpose of any tax administration is to encourage voluntary tax compliance and thereby lower the tax gap. The tax gap is the difference between the hypothetical tax revenue that would be produced if all taxes were perfectly enforced and the actual tax revenue. A program aimed at combating tax evasion is also a policy aimed at closing the tax gap.

Strong taxation system is a vehicle for the economic development of any country. Previous studies indicate significant relationship between efficiency and effective revenue collection model and the level of economic development of a country (Due, 1963; Fjeldstad and Semboja, 2001; Ng'eni, 2016). The functioning of taxation system depends highly on the behavior of the taxpayers to voluntarily comply with the tax request, rule, and policy (Mtasiwa, 2013). According to Sydney (2017). Research on influencing powers of the tax administrators on changing behavior of the taxpayers is still limited. However, empirical literature indicates the presence and coercive power in tax administration, characterized by threatening compliance which results in resistance to change (Mponguliana, 2005; Mlay, 2015; Sydney, 2017). ZRB on tax administration involves intimidating power by threatening and warning the taxpayers that they will suffer the consequences for noncompliance with the request, rules, or policy. Despite of the fact that many researches have been done on negative voluntary tax compliance of the taxpayers to the tax system, and many recommendations to influence voluntary tax payment compliance to the ZRB and for the taxpayers, but the problem still persists. Due to this continuing adverse voluntary tax payment compliance, this research study intends to examine factors influencing voluntary tax compliance in Zanzibar.

Objectives of the Study

- i. To assess the factors that influence voluntary tax compliance in Zanzibar.

Research Question

- i. What are the factors that influence voluntary tax compliance in Zanzibar?

Theoretical Literature Review

Economic Based Theory

The first and well-known theory of economics suggests that “taxpayers are amoral utility maximizers- they are influenced by economic motives such as profit maximization and probability of detection”. As such they analyze alternative compliance paths for instance whether or not to evade tax, the likelihood of being detected and the resulting repercussions and then select the alternative that maximizes their expected after-tax returns after adjusting for risk. This process is referred to as “playing the audit lottery” by Trivedi and Shehata (2005). Therefore, according to the theory, in order to improve compliance, audits and penalties for noncompliance should be increased.

Psychology Theory

Psychology theories on the other hand posit that taxpayers are influenced to comply with their tax obligations by psychological factors. They focus on the taxpayers’ morals and ethics. The theories suggest that a taxpayer may comply even when the probability of detection is low. As opposed to the economic theories that emphasize increased audits and penalties as solutions to compliance issues, psychology theories lay emphasis on changing individual attitudes towards tax or revenue systems (Chaudhry, 2010).

Empirical Literature review.

This section highlights diverse related studies from which the framework of this study is grounded. The section is supplemented with sufficient studies with information which when analyzed leading to discovering the research gap.

International Studies.

Gadi (2015) conducted a study in Rwanda to find out factors affecting tax compliance. The broad objective of the study was to find the extent to which economic, political and social factors affects tax compliance in Rwanda in tourism industry. The study used qualitative method of data

collection as the primary data, while secondary data were collected directly from the Central Bank of Rwanda. Furthermore, the study employed the Ordinary Least Square Method (OLS) of multiple regression of data analysis. The data obtained from this study revealed strong relationship between variable. Where the growth of tourism industry which is significant to the tax contribution for the national development has strong relationship with other variable of political and social factors. In Rwanda tourism industry is leading in voluntary tax compliance comparing with other industries. This study was important to verify the potential of voluntary tax compliance for the economic development of any sector or a country. Despite of its usefulness this study did not involve other sectors like manufacturing, trade, mining and many other. Therefore, another study is required to find out factors influencing tax payers' voluntary tax compliance with the tax system for another sectors like trading.

Ma (2017) conducted a study on taxpayers' attitudes towards tax compliance in both developed and developing countries where the study revealed that some determinants such as age, gender and direct democracy has positive correlation with tax compliance attitudes in developed countries while in developing countries showed to have no effect. On this study different societies were concerted, and tax compliance magnitude were measured to verify their strength across different culture. The study revealed that positive attitude toward tax system has a significance relationship with voluntary tax compliance. This positive attitude toward tax system were observed more in developed countries, unlike in developing countries where the tax system itself is not clear to the taxpayers. Zanzibar is among of those developing countries where tax system is also unclear to the tax payers. This study was too general to address the problem of taxpayers' attitude toward tax compliance for every specific country. Therefore, specific study is required to in Zanzibar.

Horodnic (2018) conducted a systematic review on tax morale and institutional theory. Observed that, positive tax morale is a result of the interaction between the formal and the informal institutions. When formal and informal institutions are all managed by exercising the objectives of equity then taxpayers tend to increase voluntary tax compliance. Further, observed that an asymmetry in a society between the laws and regulations of its formal institutions and the socially shared unwritten norms of its informal institutions will result in low tax morale. Indeed, the study did not consider none pecuniary aspects of the tax compliance decision. Therefore,

another research is required to observe the effect of pecuniary aspect of the tax compliance decision.

Mwangi (2014) conducted a study in Kenya which hunted to identify factors that influence tax compliance with the Kenyan tax system. The study focused on SME's operating within Nairobi's Industrial Area. The study anticipated to find why SMEs in Nairobi industrial area were reported as the group with undesirable tax compliance behavior. The research measurable variables were high tax rates, several tax heads, and coercion in law enforcement as independent variables, while SMEs tax compliance as the dependent variable. The findings of the study revealed that with regard to tax rate as a factor influencing SMEs compliance, the majority view that Kenya has high tax rates with several different tax heads and this consequently hinders their level of compliance. The study was conducted in Kenya hence there is a need to conduct another study in Zanzibar perspective.

Ng'eni (2017) conducted a study on an assessment of factors affecting tax morale and voluntary tax compliance towards effective tax administration in Tanzania. The study revealed that most government revenues are lost due to inefficient and ineffective administration mechanisms, poor taxation policy and improper management in encouraging tax morale and voluntary tax compliance. The findings from this study revealed the important relationship between tax moral and voluntary tax compliance. Tax moral act as the engine for voluntary tax compliance. It is hard to influence voluntary tax compliance without first encouraging strong tax moral. The study further suggested the ways on which tax moral can be raised through level of access of public goods by the tax payers. Cited an example of tax payers who are highly encouraged to pay tax but they have no road on their localities, but the government is highly concentrating on concentrating roads on none potential area especially for political opinions. However, the study did not fully exhaust on how compliance costs affects taxpayer's voluntary compliance.

The study done by Mutakyawa (2009) focused on factors affecting voluntary tax compliance was based on professional attitude of taxpayers, intention to behave obediently, and financial condition as an independent variable, and use voluntary tax compliance as the dependent variable. The outcomes of this study revealed that most of the professional accountants fraudulently uses their profession to cheat on filling tax returns and in under declaring their income. The study supplementary underlined effective education and motivation as an appropriate measure to combat the problem of professional attitude to commit fraud. Conversely, the study did not mention about economic adversity infatuated by those professional accountants. Professionalism can only be driven when economic problems have been taken into consideration. Therefore, further research is required for taxpayers who are not professional. How they exercise their voluntary tax compliance rights with increase in compliance costs.

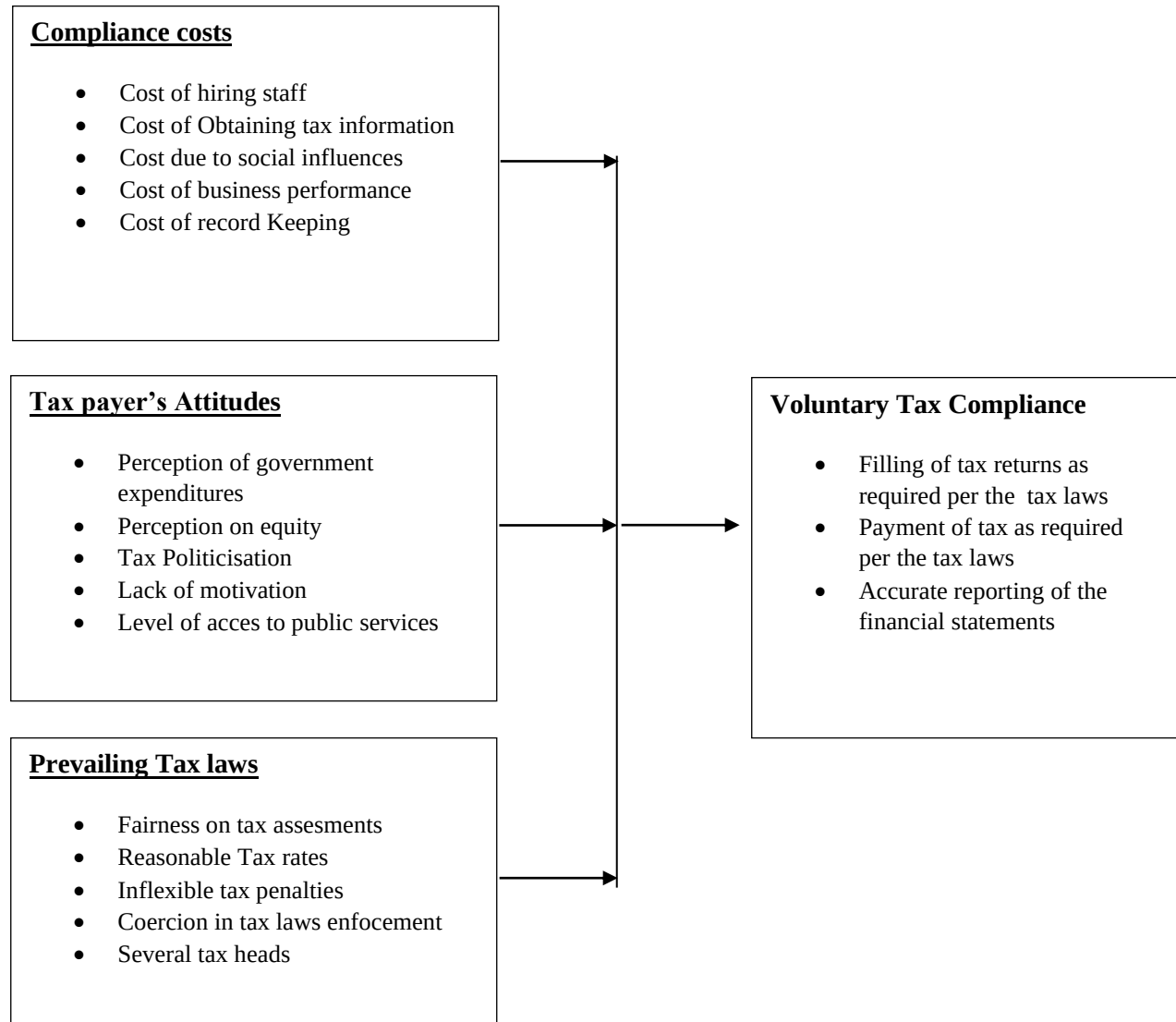
The cost of ensuring that tax payers comply with tax is a major impediment in ensuring good tax compliance behavior from taxpayers (Bird and Zolt, 2005). Research has also established that tax compliance costs for tax payers is high among informal sector tax payers because of the lack of knowledge of the tax laws and skills to determine their tax liability (Shome, 2004). Most tax administrators the world over create additional burden on businesses in terms of reporting for tax purposes with complex tax laws (Keen, 2011). This has resulted in increases in costs for entities and persons who attempts to comply with the tax laws (Barrer, 2005).

Conceptual Framework

Independent variables for this study factors that influence voluntary tax compliance in Zanzibar which are compliance costs, Tax payers attitude, prevailing Tax laws. The dependent variable is Voluntary tax compliance. The figure below illustrates the framework to be used in this research.

Independent Variables

Dependent Variable



Research Methodology

Research Design

This study applied the cross-sectional research design so as to explore insights into the different issues as they exist in Zanzibar regarding voluntary tax compliance.

Area of the Study

The area of study was Zanzibar Revenue Board and Tanzania Revenue Authority.

Target Population and Sample Size

Targeted Population

The participants in this study were drawn from Zanzibar selected tax payers and ZRB officials whose total number is expected to be 200. To accomplish so, a sampling frame was gathered from Zanzibar taxpayers and some ZRB officials, from which a sample of 200 is expected to be drawn using a random sampling procedure.

Sample Size

The study used a non-probabilistic sampling technique to select sample size of 200.

Data Collection Methods

In this study the data were collected from primary sources. In that regard, this study involved the collection of primary data from primary sources in the field as fresh information obtained through questionnaires.

Data Analysis

Data analysis helps to identify the statistical patterns and relationships between variables that used in the research. After the Data have been collected, edited, classified, coded, and tabulated to facilitate the quantitative analysis using Statistical Package for social Science (SPSS). Moreover, quantitative analysis of the information collected from both primary and secondary sources which are more intuitive than based on judgmental consensus and expert information.

Analysis and presentation of finding

Motivational Factors

As indicated in the literature section, several researchers have proposed two main methods (i.e. the carrot or stick approach and the responsible citizens' approach) as motivational elements. Penalties and sanctions are widely used in the stick or carrot strategy to encourage tax payers to pay their taxes. Because humans are not donkeys, this technique was ineffective in many wealthy countries. In the research area, the same conclusion was reached: enhancing legal enforcement and penalties will not induce them to pay taxes voluntarily.

This is not to say that taxpayers don't want penalties or legal action taken against them; it just implies that penalties and legal action aren't the best strategy to assure tax compliance. As indicated in Table 4.6, the respondents favored a responsible citizens' approach that included educating tax payers, enhancing public relations, providing required information about the use of collected revenue, and making the collecting system simple and transparent as motivational elements. Table 4.6 shows more information about the findings.

Table 4.1: Responses on Motivational Factors

Possible Measures	Agree		Disagree	
	Frequency	Percentage	Frequency	Percentage
Strengthening legal enforcement and Penalties	83	41.5	117	58.5
Improving relationship with the public	196	98.0	4	2.0

Third Business and Economic Development Conference (BEDC, 2022), Held on 15th - 16th November, 2022 in Dodoma, Tanzania

Educating the tax payers and conducting consultation sessions	189	94.5	11	5.5
Providing necessary information to tax payers regarding the provision of services and utilization of taxes collected	185	92.5	15	7.5
Reducing tax rates and making the collection procedures simple and transparent	197	98.5	3	1.5

Source: Author, field survey, 2022

Table 4.1 shows a significant size (58.5 percent) of taxpayers do have a reservation that strengthening legal enforcement and penalties by itself can ensure voluntary tax compliance behavior. These people rather have the belief that encouraging the responsible citizens' approach has to be the axis of the motivational factor. Regarding the other measures almost all (i.e. from 93-98 percent) of the respondents strongly agreed with the possible measures proposed in the study. It is evident from the table that the majority of the respondents felt that improving relationship with the public and making the collection procedures simple and transparent (98 percent) could motivate them to pay their fair share of taxes voluntarily. Similarly, conducting different consultation session and educating tax payers (94.5) percent is another possible measure which is strongly proposed by the respondents as other motivational factors in the study area.

The determinants of Voluntary Tax Compliance Among Tax Payers in Zanzibar

The demand for voluntary compliance through tax enforcement has an impact on tax compliance among tax payers in the Zanzibar. Tax enforcement devices, according to Bodea and Lebas (2013), are generally essential to promote tax compliance. This is supposed to build on the foundation of tax compliance behavior and attitudes. The instruments must be able to discipline tax payers through simple social contact, and most tax payers evade because they are afraid of the social punishments that would be applied if they are detected and identified publicly.

According to Majiwa (2014), enforcement methods must be directly tied to increased compliance levels, tax rates, and compliance costs. Individual taxpayers require enforcement methods to comply, while the form of the tax, as well as the cost and nature of compliance, have had a detrimental impact on tax compliance. The design of the tax payers' system results in a higher degree of compliance, which is visible at both the individual and corporate levels.

The impact of tax design's perceived utility on tax compliance, as well as proper awareness among tax payers about tax design, are essential factors in influencing tax payers' design. According to McKerchar and Evans (2009), the tax system must be adequately designed to meet the needs of tax payers. The advantages derived from taxation are usually linked to knowledge of the actual amount of tax. Access to information about the tax system encourages tax payer compliance. Similar findings were reported by Sacks (2012), who discovered that tax compliance is fundamentally linked to a thorough understanding of the current tax system.

These findings imply that effective tax planning may be able to eliminate a variety of tax evasion methods. When a tax system is perceived to be unjust, tax evasion, according to Moore (2004), can be considered as an attempt by the taxpayer to change the terms of trade with the government, at least in part. These findings demonstrate that if tax payers had access to information on tax design, they will have more flexibility in complying with the current tax system. Taxpayers, according to Chijoriga (2012), must be provided with adequate knowledge of tax design, which must be provided in a comprehensive manner. It is more difficult to comply with the legislation because of the increased tax rate. As a result of the tax increase, taxpayers are more likely to avoid paying their taxes. According to Casey

and Castro (2015), taxpayers must respect and obey existing tax legislation in order to prevent tax evasion.

The greatest major hurdle to tax compliance in Zanzibar is the tax administration. Evidence to highlight the usefulness of deterrence approaches to address non-compliance needs to improve tax administration has been proven to be a successful strategy to encourage truthful behavior in some circumstances, according to Sandmo (2005). When it comes to enforcing tax laws, tax administrations mostly rely on penalties and the threat of being discovered. According to Moore (2004), tax design must be based on the needs of the tax system, and taxpayers must pay tax on time, in the correct amount, and at the expected tax rates. The quantity of tax that must be paid is directly proportional to the right collection and planning approach, and the tax system is directly proportional to the type of tax.

Conclusion

It's worth noting that a variety of factors influence the perceived usefulness of tax design in terms of tax compliance. The right tax structure could help to decrease tax evasion that isn't essential. To some extent, the tax payers are given access to necessary information about the tax plan. This is primarily connected to tax compliance. The elements that influence the usefulness of the tax system are mostly related to the increase in tax rates, which effectively discourages tax compliance. Taxpayers tend to avoid paying tax as a result of tax increases. It is apparent that tax administration is the primary impediment to voluntary compliance.

Recommendations

To close the tax gap, multiple techniques are required. Because noncompliance has several causes and spans various types of taxes and taxpayers, no single approach is likely to fully and cost-effectively address it. In general, a deeper understanding of the elements that influence taxpayer behavior, as well as their interrelationships, can aid in the development of tailored tactics that target noncompliant taxpayers while minimizing the impact on compliant taxpayers.

The most obvious prerequisite for fairness or equity is to treat all persons equally in all situations. If there is a rationale for not discriminating amongst equals, then follows that discrimination should be applied to those who are not equal. Tax equality and fairness

are achieved not only by levying equal taxes on individuals with equal income, but also by requiring each taxpayer to pay according to his or her ability to pay. Furthermore, bringing non-taxpayers into the tax system must be viewed as a way to ensure tax equality. To put it another way, it's unjust to claim that the tax system is fair when certain qualified traders aren't paying their fair share. Taxpayers will be discouraged if the tax is perceived to be unfair and inequitable, or if a large number of people are not paying.

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Effectiveness Of E-OPRAS In Assessing and Appraising Employees' Performance at First Housing Finance Tanzania Limited

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Abstract

Assessment of worker's performance is a complicated process which must be done with a great degree of carefulness. In Tanzania currently most of the organizations and institutions use OPRAS as the means of assessing and appraising workers from time to time. However, this situation is still having a lot of grievances as some workers point out that it is not fair and biased method of assessing employees. This is due to the fact that OPRAS involves interaction between employers and employees on the table who discuss rating of employees' performance in a certain period of time as per objectives set initially. As such it sometimes depends on the feeling of the employers on their employees upon rating worker's performance. For this reason, some where there is a degree of nepotism eventually employees are not assessed and appraised fairly leading into either their demotion or promotion based on employer's feelings. For the First Housing Finance Tanzania limited the assessment of employees is done through electronic OPRAS where there is no interaction between bosses and their subordinates. Such a situation has drawn an attention to the researchers to carry out this study to assess effectiveness of using electronic OPRAS in assessing and appraising employees' performance at FHFTL in Dar-es salaam region. This study has inspected outcomes of exercising an Open Performance Review Appraisal System at First Housing Finance Tanzania Limited (FHFTL) and provided the means to be adopted by other related organizations invested in advanced technology in their day-to-day operations. The study deployed quantitative research approach to meet the targeted goal. A census technique was deployed to obtain respondents as the study took all 68 employees at First Housing Finance Tanzania Limited (FHFTL). Data were collected by using documentary review and

questionnaires. The primary data were analyzed by using descriptive statistics through the Statistical Package for the Social Science (SPSS) version 23.0 to get statistical distribution and the outcomes were conveyed in a form of numbers for quantitative presentations. Findings revealed that organizations invested in systematic and advanced technology that integrates all the activities related to the employees' appraisal are the best means and practice of exercising fair means of assessing and appraising employees in the organization appropriately. Based on the findings of this study we therefore recommend that employers across the country through ministry of work should re-think new ways of gauging employees rather than relying on the old approach (OPRAS) alone to determine the actual altitude and effectiveness of the employees' performance in the organizations. The study has suggested employing the system-integrated method that assesses employees' performance accurately through electronic means.

Keywords: *Employees. Employers appraisal. performance. OPRAS*

Introduction

In the context of Tanzania, some years back before 2009 most of the organizations evaluated employees' performance by using old system called closed performance review appraisal system (CPRAS) which made some difficulties for the appraisee to know whether is fairly or unfairly evaluated. This situation caused shouting of employees in both private and public organization because the evaluation based on the rule of thumb and feelings of the supervisor. CPRAS used as a tool to detect the best worker to be announced and awarded incentives during the international workers day which is celebrated every May 1st each year. It was a favoritism kind of approach since was made by the feelings of the supervisor alone, thus the appraises had unequal opportunity to become best workers at First Housing Tanzania Limited (FHFTL).

The aspect of employees' performance assessment in the organizations has been the major problem in both private and public organizations since they lack uniformity and similar base for assessing and appraising the employees (Nwata, U. P., Umoh, G. I., & Amah, E. (2016), Hamed, S. M., & Potapova, M. A. (2021), Iqbal, N., Anwar, S., & Haider, N. (2015) & Mani, K. P., Sritharan, R., & Gayatri, R. (2014)). Most of the organizations in Tanzania fail to have equal and fair approach of assessing employees' performance which is the prime base of motivating and promoting employees in the organization. This reason has pushed the researcher to carry out the study, and eventually suggesting the best way of assessing employees' performance at workplace

and guiding the organizations on the best way which can be engaged to motivate and promote employees fairly and transparently for efficient organization's performance at FHFTL as other related organization operating in Tanzania. The Objectives of this study were to: identify methods used for employee's assessment and appraisal at First Housing Finance Tanzania Limited (FHFTL); examine employee's involvement in performance adherence on an OPRAS at First Housing Finance Tanzania Limited (FHFTL); and assess effectiveness of e- OPRAS at FHFTL

This survey has helped First Housing Finance Tanzania Limited to introduce special training program to the staff evaluated negatively in terms of their performance as discovered by the system. The appraisal system installed make the exercise of assessing individual performance easy and success and failures are rapidly detected.

OPRAS comprised information linking with perfection and imperfection of the employees to be easy known to the management. The management has to bring back to the staff and everyone has to take serious remedies for the identified weakness and better performance should receive incentives and or promotion.

The automated open performance review appraisal system at the First Housing Finance Tanzania Limited has made the process identifying the candidates who requires promotion easy since Performance Anchored Rating Scale (PARS) indicates directly his/her performance and action required to him/her.

The appraisal system at the bank indicates results associated with individual performance in the system, thus has made the process of detecting the individual performance easy particularly strengths and weaknesses and the final action required by the management to him/her immediately. From the particular organization when the individual weaknesses raise above the tolerable level the staff likely to be terminated otherwise promoted

The process of effectiveness of employees' appraisal system helps the management of the organization to set appropriate compensation strategies as related guidelines for effective operation at the First Housing Finance Tanzania Limited.

The study focused at First Housing Finance Tanzania Limited situated in Dar es Salaam – Tanzania, which is offering the housing loans national wise.

Definition of key terms

The Open Performance Review Appraisal System (OPRAS): It is an approach of assessing employee's performance in both public and private organizations operating in Tanzania which is designed to capture both core and routine activities of the organization aiming at determination of individual competences on performance and is a base for organizations' performance's improvements (Songstad, et al., (2012) & Mathias, (2015))

Employees' appraisal: refers to the annual managerial process of reviewing employees' job performance based on skills, achievements, growth and overall individual employee contribution to the organization. (Iqbal, *et al*, (2013)).

Employees: Are the people employed by another person or organization for wages or salary and in a position below the executive level and they should be accountable for the results. (Farooq, M., Farooq, O., & Jasimuddin, S. M. (2014))

Employees' Performance: refers to the situation at which staff fulfils properly their assigned duties by completing the required tasks with required behaviors at workplace by indicating positive effects on morale and quality of output produced. (Muda, Rafiki, & Harahap, (2014)).

Empirical Studies

The study done by Songstad et al (2012); found that there was a general reluctance towards OPRAS as health workers did not see OPRAS as leading to financial gains nor did it provide feedback on performance. They realized that the aim of having OPRAS as a performance measuring tool was to seek to improve performance through setting individual goals, measuring the achievement of the goals and providing feedback to the workers in a certain organization. Dickson (2013) indicated that health workers had great expectations towards P4P but also that they were reluctant towards filing the OPRAS forms. The study pointed out that at the time of introducing OPRAS into the working systems, the primary objective was to increase openness and escaping from ill-treatment of the employees which is against the standards set by International Labour Organization (ILO) approaches on employees' evaluation. Matete, (2016); pointed out that some of primary school teachers did not see practicability of OPRAS in their

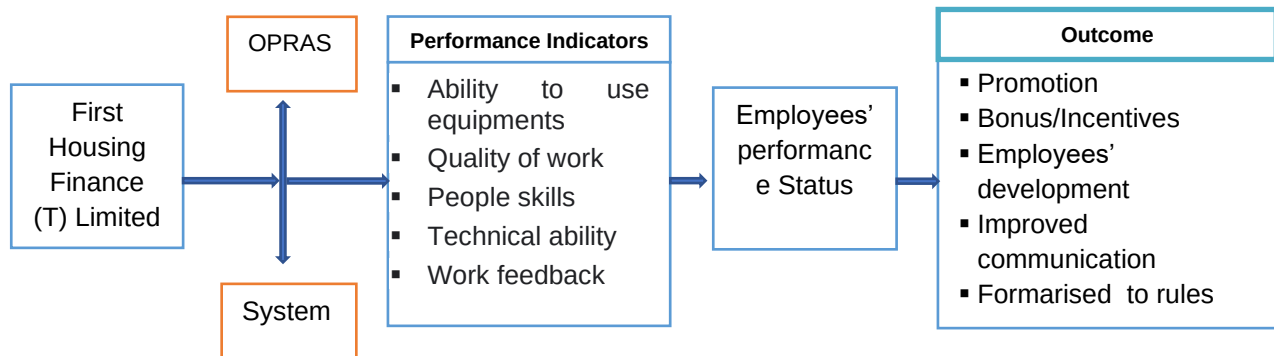
working environment as it had goals that did not reflect reality found in their schools. According to Brim (2012, p. 3) as quoted by Matete, (2016); *“employee’s responses towards work depend on intrinsic or extrinsic motivation, possibilities of attaining goals, ability of the managers to support subordinates”*. The working condition at workplace also had been the soft drive to the employees in attaining organization goals.

Nchimbi, (2019) found out that OPRAS as used at Iramba District Council by then, it was not adequate tool to improve employee’s performance. Bernard, (2013) revealed that more than half of respondents viewed OPRAS as a measurement tool which has no advantage, it is a weak tool for measuring work performance, and this is because majority of respondents have heard about OPRAS, but their involvement in the whole process is minimal, less than half of respondents are involved.

Tefurukwa, (2014) asserted that OPRAS is the prime tool for identifying, judging, evaluating and comparing the magnitude at which the objectives of the organization had been achieved. For more than 20 years back, there had been no OPRAS improvements in any means to make it simpler, suitable and compatible for the process of employees’ evaluation in the public organizations. These weaknesses have made the process of evaluating employees in the organization to be less effective and cannot assist managers properly in the process of making decisions. However, in private organizations like FHFTL there had been great changes which attracted the researchers to conduct an inquiry.

Conceptual Framework

OPRAS is a complicated approach that requires mutual understanding between all key players of the organization. First Housing Finance Tanzania Limited has automated the process, which easy the employees’ assessment procedures. The performance indicators are adjusted based on really performance of the individuals when filling the activities done in the system. Performance Anchored Rating Scale (PARS) indicates individual performance by comparing the agreed performance criteria and the actual one where the indicators are indicated in percentages and with bar charts. The summary of flow of information indicating performance review appraisal system indicated below stage after stage, while the outcome after evaluation may be negative or positive.



Source: Research Construct (2022)

The outcome from the process may be promotion, demotion, termination, improved communication, formalized rules, and or employees' development. The electronic open performance review appraisal system does not entertain biasness; it evaluates someone based on the output of which the individual employee was assigned by the superior through system to perform in the specified period of time.

The relationship between literature review and knowledge gap

Baraka, (2015), Rugeiyamu, (2019), Alman, & Yusuph, (2020) & Macha, (2014) assert that, OPRAS had been the common tool used for assessing employees' performance in the organization for decades back. It had been ineffective since has number of deficiencies which remained without improvement for quite long-time despite of being in use. The existing OPRAS had been used as a tool for motivation and promotion determination, which realized to be unfair because evaluation of employees' performance sometimes is based on the feelings of the supervisor. The management at FHFTL viewed the process and came up with the modern means of assessing employees' performance (e-OPRAS) which seem to be the best, since limits interactions between supervisor and respective subordinates under appropriate span of control.

Methodology

Research Approach and Design

The nature of the study has influenced the researcher to engage focus group discussion, interview and questionnaires to obtain information which supported in data analysis and discussion. The

inquiry aimed at determining the usefulness of the OPRAS to both management and employees at First housing finance Tanzania limited. The analysis, discussion and interpretation of the research information considered on what respondents said and commented. With that regards, the study is the mixture of both qualitative and quantitative approaches and has managed to include both descriptive techniques and statistical measures for study generality.

Case study area

The research has covered one organization named, the First Housing Finance Tanzania Limited situated in Dar es Salaam, Tanzania as case study. The organization is offering housing loans to all parties of Tanzania. The company is specialized to the mentioned activities and is the first in the country. Other financial institutions offer general loans but not specific as the First Housing Finance Tanzania Limited normally do. The company do appraise their staff by using electronic OPRAS, thus the researcher was attracted to assess the effects towards organizational performance.

Targeted Population

The FHFTL has got 68 employees, including the executives. The study took all staffs into account, because the performances of all staff are determined by using the OPRAS which is automated to simplify the analysis and biasness during evaluation. Kothari, (2017) asserts that, when the population is small, then it is possible to take all candidates into consideration by considering that all of them have information that may be useful in completion of an inquiry.

The study samples

The OPRAS is a tool of assessing individual employees' performance, where everyone is responsible for the process. The FHFTL has only 68 employees, therefore all the employees were taken as sample size for study generalization since there are few employees.

Sampling procedures

The FHFTL has only 68 employees, thus all employees were considered in data assortment for the completion of the research requirements.

Methods and Instruments for Data collection

Methods for Data collection

Assessing employee's performance is a complicated process and depends on many factors such as employer-employee relations, altitude of the employer and employee, employees' knowledge and skills, level of education and specific skills, kind of activities employees assigned by superior, resources budgeted for completion of the same assignment and working environments. For the study to be conclusive and meaningful, had assumed selected approaches of data gathering of which all numerical statistics and descriptive data were gathered and analyzed. Qualitative technique involves gathering of primary through in-depth interview, structured questionnaires, site visiting, observation and analyzing data based on the views of the respondents. Quantitative research includes review of secondary data and their analysis provides descriptive results, correlation and statistical results for the study's interpretation.

Instruments for Data collection

The common data collection tools in research are observations, questionnaires, interview, survey, documentary review and many others based on the specific purpose of the study (Kielhofner, & Coster, (2017)). But for the purpose of modalities of assessment of employees' performance at FHFTL the researcher used questionnaires and documentary review to obtain data that fulfil the study.

Validation of the instruments for Data collection

The instruments (questionnaires and documentary review) were tested for their validity and reliability. Nora, Zoboli, & Vieira, (2018), Kim, (2009) & Bammann *et al* (2011). Questionnaires were tested by using rating scales which are suitable and compatible to the study while documentary review were tested using performance checklist to explore achievements of the organization for the financial years 2018/2019, 2019/2020 and 2020/2021

Data processing and Analysis

Primary data were collected by using questionnaires from the respondents, assembled and interpreted with the aid of researchers' team. The primary data were analyzed by using the Statistical Package for the Social Science (SPSS) version 23.0 to get statistical distribution and the outcomes were conveyed in a form of numbers for quantitative presentations. Moreover, the qualitative data mainly obtained through review of secondary data and interviews related with

employees' performance review were tabulated to make a simple presentation suitable for the report.

Ethical considerations

The ethical permission was granted by the FHFTL authority and releases a permission to conduct the study at their organization. Information about the application of the OPRAS and the rating mechanisms included within questionnaires as paramount tool for gathering primary data used by the researcher from the respondents. The researcher has obeyed all the ethical research principles as recommended by academicians and researcher's practitioner. (Resnik, 2011, Resnik, 2014 & Resnik, & Elliott, 2016).

Results and Discussion

Methods of employee's assessment at First Housing Tanzania Limited (FHTL)

The observation from the FHFTL particularly on assessment of the employees' performance is fair, and allows very little intervention from the supervisors of all sections. The organization has developed objectives to every individual that require them to perform and feed feedback into the system; hence the system itself assesses the individual employee based on ones' performance. The paramount condition for this case, the objectives must be defined in the system as criteria for the assessment. At FHFTL many different methods of employees' assessment had been employed for many different periods to various organizational levels in the order as indicated in the table 4.1 from the old to the latest approach.

Table 4.1: Methods of employees' assessment at FHTL

Employees Assessment Methods employed at FHTL	N	Minimu		Mean
		m	Maximum	
Management By Objectives	68	1	6	4.48
360 degrees feedback System	61	1	6	4.26
Assessment Center System Method	63	1	6	4.38
Human Resources (Cost) Accounting Method	65	1	6	4.55
Psychological Appraisal System	68	1	6	4.34
Behaviorally Anchored Rating Scale System (BARSS)	68	1	6	4.34

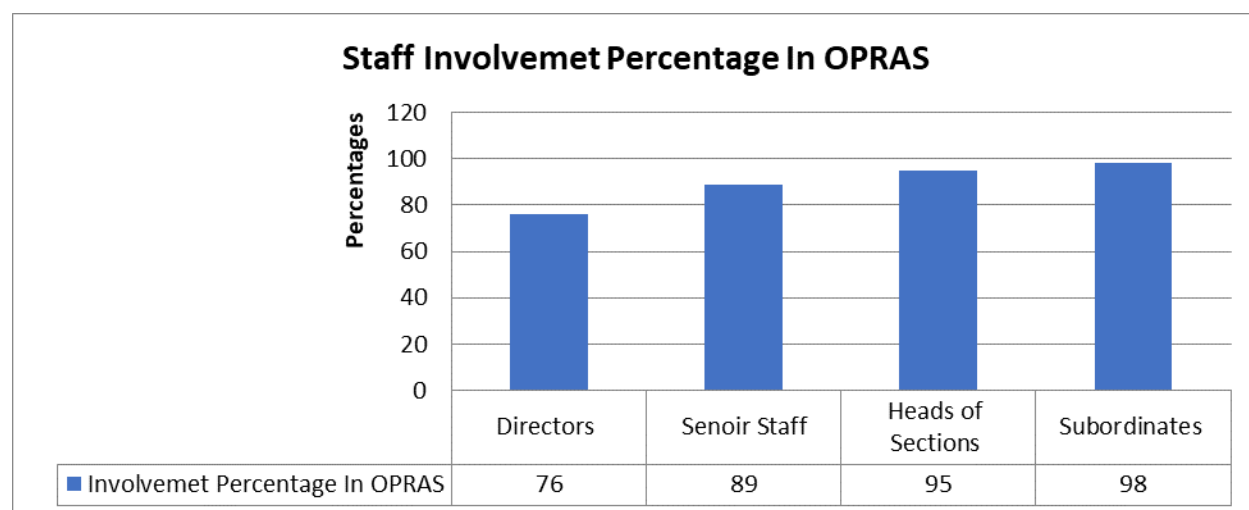
Source: Field Data (2022)

Among the listed methods of employees' assessment in table 4.1 the most popularly used approach of assessing employee's performance at FHFTL is Behaviorally Anchored Rating Scale System (BARSS) and had been effective, fair and is a base tool for promotion and incentive provision in the organization as had been rated by the respondents with an average of 4.34 of all methods of employees' assessment.

Employee's involvement on the exercise of employees' assessment at FHFTL

FHFTL is a private organization with its own policies, laws, procedures, direction as determined by mission and vision of the organization. It had been observed that, the issue of employee's involvement in the exercise of OPRAS is not negotiable, that is to say everyone working in that organization must adhere to the rules, laws and policies of the organization to secure his/her employment. Thus, majority had been forced to participate in the exercise vigorously.

Behaviorally Anchored Rating Scale System (BARSS) is the current approach of assessing employees' performance at FHFTL, and the OPRAS are tailor-made to meet the requirement of the organization and are different based on ones' position in the organization as indicated in the figure below:



Source: Filed Data (2022)

The response to the involvement of electronic OPRAS (e-OPRAS) is low from the top management and is high to the subordinates. The Directors and some senior staffs are exempted from filling e-OPRAS due to the specific and special tasks excluded from the assessment

however they are obligated to complete their activities on time. Heads of Section and Subordinates are obligated to fill the e-OPRAS as required, because remain as a tool for promotion, incentive provision and their performance on the job; bring job security, that being the reason the percentage of the involvement in OPRAS is the highest.

Outcomes of exercising OPRAS at FHFTL

The use of sophisticated means of assessing employees' performance at FHFTL had been significant approach for the development of the organization at great extent as reflected in various aspects of the organization.

- i. *Productivity growth:* The organization is using electronic means of assessing employees' performance in the organization, which is assessing fairly and everyone is feeling his or her value in the organization. This brought higher employees' commitment towards work performance and eventually the profit had been increasing in the trend of 41% in the year 2018/2019; 71.6% in the year 2019/2020 and 87% in the financial year 2020/2021 with growth of an average of 15.6% annually.
- ii. *Employees' motivation:* The approach of assessing employees' performance has little human supervision, and has reduced unnecessary bureaucratic and dramatic situations between the processes of employee's motivation resulted from their performance. The system had been fair all the time in its operations, the employees are motivated based on the criteria indicated from bonus, and other financial benefits including salary increase based on the frequencies of bonus and employee earnings.
- iii. *Employees' promotion:* The employees' assessment approach had been the tool for employees' promotion. In the organization, the employee promotion is based on frequencies of individual employees' performance and his/her contribution in the organization. In the financial year 2018/2019, three staffs were promoted to higher positions; 2019/2020 four staffs were promoted to higher positions; and 2020/2021, two staffs were promoted to higher positions.
- iv. *Proper utilization of resources:* At FHFTL the resources are allocated and utilized

properly. Everyone is assigned specific objectives and supplied appropriate resources which facilitate him/her to achieve the stated objectives on time. Management by walking around techniques is the one engaged at FHFTL to control the resources so that can only be used for specific purposes.

Conclusion and Recommendations

Conclusion

Employees' assessment and appraisal are twins which are inseparable in any formal and practicing organization. Human nature tells that, most of the bosses are selfish, group employees into classes, have both positive and negative feeling against employees at workplace. All these can be the sources of assessing employees properly or improperly as per superior's feeling if the means of assessment is a paper work used by all public organizations operating in the United Republic of Tanzania (URT), where a boss has to indorse his/her comments that can lead to someone's promotion or demotion. Thus, the use of e-OPRAS as used by FHFTL is the best means because is fairly done, due to the use of feedbacks fed and approved in the system and reduces unnecessary interaction between supervisors and subordinates at work place.

Recommendations

This study recommends that, all employers (private and public employers) should adopt the electronic system of assessing employee's performance at workplace for better improvements, fairness, judging employees based on their performance and motivation and promotion without formidable, with the reason that favoritism will automatically be eliminated. Through engagement of the electronic means of assessing employees' performance at workplace, it can also be recommended that, employers/organization should use the system appropriately to identify best performing workers for the particular financial year and to be publicized and awarded accordingly during the international workers day (Mei Mosi)

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Usage Behavior of eLearning in Tanzanian Tertiary Institutions: Experience from the College of Business Education (CBE)

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Abstract

The study investigated usage behaviour of eLearning in tertiary institutions in Tanzania, an experience from students at the College of Business Education. The objective of the study was to identify current practices of eLearning implementation among students in tertiary institutions; to identify factors influencing students' acceptance of eLearning in tertiary institutions. The Kish's 1965 formula for cross-sectional studies for sample size employed to determine the proportional sample of 599 which was calculated from the respective institutions. Simple random sampling technique was used to select 533 who were administered questionnaires, however in a process of data collection 30 students were conveniently selected for interviews and 4 eLearning coordinators as well as 4 librarians were also purposely selected for interview. Other secondary data was obtained through documentary reviews. The thematic analysis used to analyse qualitative data, while the quantitative data was analysed through use of SPSS to derive frequencies and percentages. The finding revealed factors impedes the integration and students

‘acceptance of eLearning in tertiary institutions are; lack of the requisite ICT infrastructures supports eLearning, factors associated to cultural learning styles, technological challenges, pedagogical eLearning challenges, lack of technical training and time management. The study further recommends the following; the need for eLearning creation students’ awareness campaigns and the instructors; the need to establish standards policies or institutional guidelines guiding student for eLearning implementations; the need to allocate adequate budgets for eLearning supports; and the need to strengthen ICT infrastructures.

Keywords: Embedded learning, eLearning, students’ virtual learning, usage Moodle systems, students’ eLearning adoptions, tertiary business institutions.

Introduction and Background of the problem.

The usage of the eLearning system is among the areas motivating researchers in the higher learning institutions. For example Suryawanshi (2015) in a study on eLearning implementations in higher learning institutions in Pakistan and Libya revealed limitations such as lack of teachers integrating to Moodle technology. However in the African context Webb, et al.; (2018) associated eLearning challenges with cultural and the educational background of students; lack of awareness; negative attitudes towards eLearning; lack of the institutional mechanisms supporting eLearning initiatives; inadequate ICT infrastructures. Despite the challenges limiting the effective implementation of eLearning in Africa, still numerous studies denote the positive impacts of eLearning in academic institutions (Makokha, 2016; Muneja & Ndenje-Sichalwe, 2017; Letseka, 2018. In this regard, the current trend of eLearning studies evidenced the growth of eLearning in tertiary institutions (Salawudeen, 2017).

The economic growth and the increased number of institutions in Tanzania leads more students to pursue higher education than ever before (Nunda, 2019; Alhabeeb & Rowley, 2017). In the same vein, the government has improved student’s loan support for students (Nunda, 2019). In this manner the accessibility of the loan raised up the number of students in such institutions, this situation necessitated such institutions to shift from the traditional mode of delivery to eLearning systems (Khidhir, et al., (2020). According to Arkorful (2015) & Abaidoo (2015) eLearning allows scholars to access and share information for teaching and learning. However, the usage of eLearning depends on the supportive ICT infrastructures (Kaplan & Haenlein, 2016). It has been

noted that due the limited allocation of funds in Tanzania only 94 out of 147 institutions managed to integrate with the eLearning system (Sanga et al., 2019). However, the eLearning studies informed that for the institutions managed the integration with eLearning systems are reported lacking commitments or low institutional investments on the infrastructure (Gillett-Swan, 2017; Alhabeeb & Rowley (2017). Thus the low investments or lack of commitment in tertiary institutions negatively affects the implementations of eLearning at large. Based on reviewed literature there are limited studies conducted to identify factors affecting the students during the implementation of eLearning in tertiary institutions of Tanzania. In this regard therefore the study intends to fulfill the existing knowledge gap.

This study guided by the following objectives;

- i. To identify the current practices of eLearning implementations by students in tertiary Institutions of Tanzania,
- ii. To identify factors influencing the students' acceptance of the eLearning in Tertiary institutions of Tanzania.

The study findings are expected to contribute to the existing body of knowledge for similar studies. The study will have practical and theoretical implications towards acceptance and usage of eLearning systems in tertiary institutions. The study will come up with useful strategies for the effective eLearning systems implementations, as well as mirror eLearning implementations in the institutions of higher learning and other institutions with similar characteristics.

Methodology

Research design

This study employed mixed methods (Qualitative and quantitative) and so guidelines for such techniques were adhered too. Both purposeful and the convenience sampling used to reach the sample, while Kish's 1965 formula for cross-sectional studies for sample size was employed to determine samples from the population. The sample size was calculated at 95 percent confidence interval to estimate margin error which is equal to five (5). To collect qualitative data for this

Third Business and Economic Development Conference (BEDC, 2022), Held on 15th - 16th November, 2022 in Dodoma, Tanzania

study, the observation and face to face interviews were employed. In employing the observation, the researchers were used the naturalistic observation method where students were observed in their natural settings without any manipulation. Face to face interviews were conducted with 8 librarians and 16 ICT staff, as well as 30 students were also involved in interviews as a follow-up to what the researcher was being observed.

Simple random sampling technique was used to select 545 who were administered questionnaires. Students were involved because they are the prominent users of eLearning during accomplishment of their academic activities. So the researchers find the importance of understanding the usage behaviour of eLearning among tertiary institutions. For qualitative data only 30 students who were conveniently found in libraries or computer laboratories using computers accessing information were involved in the interviews, while purposive sampling used to select 4 eLearning coordinators and 4 librarians, who are key informants responsible for eLearning implementation. The total sample size for this study was 599 respondents. Other sources of information were obtained through documentary reviews. The thematic analysis was used to analyse qualitative data, while the quantitative data was analysed using SPSS to derive frequencies and percentages. The study was conducted in four CBE campuses i.e. Dar es Salaam, Dodoma, Mbeya and Mwanza. The involvement of all CBE campuses aimed at getting an insight of the phenomenon in the relationship with eLearning integration, acceptance and usage of eLearning Moodle.

Table 1: Shows the Respondents' Distribution

Categories	Dar es salaam	Mwanza	Mbeya	Dodoma	Total
	346(5%,)	77(5%)	47(5%)	106(5%)	533
ELMS coordinators	2(100%)	2(100%,)	2(100%)	2(100%)	8
Librarians	6(50 %,)	3(50%)	3(50%,)	4(80%)	16
Total	354	81	52	112	599

Source: Field data, 2021/ 2022

Based on the gender distributions of respondents' who were involved in a study, the findings revealed 451(84.6%) male and 82 (15.3%) females, as shown in Table 2.

Table2: Gender Distributions

Responses			ELMSC Coordinator		Librarians	
Campuses	Male	Female	Male	Female	Male	Female
DSM	300(56.2%)	56(10.5%)	2(25%)	0(0%)	2(16.6%)	4(33.3%)
Dodoma	90(16.88%)	16(3.0%)	1(25%)	1(25%)	1(16%)	3(50%)
Mwanza	40(7.50%)	7(1.31%)	2(25%)	0(0%)	2(40%)	1(20%)
Mbeya	21(3.93%)	6(1.12%)	2(25%)	0(0%)	3(100%)	0(0%)
Total	451	85	7	1	8	8

Source: Field data, 2021/ 2022

Awareness and Usability of eLearning among students

Basically, the essence of this study was to understand levels of awareness among students in relation to the usage of eLearning. The findings revealed 80% were not aware of eLearning which is available at the College. While, 20% of students involved in the study claimed to be aware of the eLearning system available. Similarly, the finding corresponds with Abaidoo & Nelly (2015) who denoted lack of awareness on the modern education systems that persists even in the other sectors including the health colleges. The lack of awareness means absence of exposure or limited searching skills, which is among a prominent limiting factor for adoption and usage of eLearning systems revealed by (Arkorful, 2015). Lack of awareness of eLearning also confirmed during interviews, when one informed a researcher that

... I am not even aware of what an eLearning system looks like While the other student added that "... I have never possessed a username and password enabling me to login in the system...". Nevertheless, surprisingly, a third year student voiced that "...I have never used Moodle since I have been enrolled at the college....I have forgotten username and passwords enabling me to login in the system....". The challenge eLearning passwords is even renowned by Obexer (2018) that it is easy to forget since its mixing numbers, signs and letters which is difficult to remember.

Table 3: Awareness of eLearning system among teaching staff and

Responses			Teaching Staff	
	Respondents	Percentages	Respondents	Percentages
Aware	500	92.76	95	97.93
Not Aware	33	7.23	2	2.06

Source: Field data, 2021/ 2022

Effectiveness on usage of eLearning Moodle

The study wanted to measure the effectiveness of eLearning usage among students in a surveyed area and the finding revealed that the eLearning is ineffective usage by students (78%). According to Makokha & Mutisya (2016) the ineffectiveness of the usage reduces the willingness of users to utilise eLearning. In this regard, the effectiveness of eLearning systems depends on the interactions of both students and teaching staff as well. Besides, during the interview one student told the researcher that "... the system itself is not very interactive so it is not effectively used by the students. This was contrary to librarians who claimed the system to be effectively interactive. Based on those two arguments the researcher realised that there is the knowledge gap which was also noted by DeLone & McLean (2016). Generally the eLearning system in campuses is not effectively used by students. Among the factors for ineffective and underutilisation of eLearning revealed in various studies were; inadequate funds allocated for the effective ICT infrastructure and lack of the user training (Tarus et al., 2015; Munezero et al. 2016; Nkebukwa, 2018), which is also noted by this study. Therefore, inadequate or the absence

of the effective ICT infrastructures and user training resulting an obstacle for using eLearning systems (Pani et al., 2015; Tarus et al. 2015; Pani et al., 2015; Munezero *et al.* 2016), consequently reducing the morally of teaching staff uploading or students downloading the contents.

Table 4: Effectiveness on Usage of ELMS Moodle among students

Responses		Percentages
Very effective	110	20.6
Effective	197	36.96
Ineffective	222	51.27
Very ineffective	4	0.75

Source: Field data, 2021/ 2022

Usage preferences of ELMS Moodle among students

Based on the usage preferences of ELMS Moodle, the findings revealed the majority of students preferred mostly the traditional approach (60.03%) and few of the preferred blended methods. Blended learning is also known as hybrid or mixed-learning learning method, which is a formal delivering learning system in which scholars learn at least in part through online and use face to face instructions (Kisanga,& Ireson, 2015. It is an approach through which face to face (F2F) classrooms are combined with the computer-mediated means. This pedagogy method is preferred since it helps to facilitate both collaborative and independent learning experience (Kasse & Balunywa, 2013). However, the use of the blended learning approach depends much on the availability of technical resources with which the blended learning experience is concerned. The technological tools needed to be reliable ([Letseka](#) , 2018); easy to use (Nyakwende, 2009); and up to date (Kasse & Balunywa, 2013); making the use of the internet more meaningful in favour of the impact on the learning environments. During interviews with eLearning coordinators added that the usage preferences of ELMS Moodle requires a thorough guidance for understanding contents.

The students told a researcher that...currently the college has no formal policies which is guiding usage of Moodle..... In contrast to that the eLearning coordinators echoed that policy is nothing rather the major issue facing student access to eLearning systems is the matter of technophobia. Instead there are only online instruction manuals, which also require you to have the internet to access it.....”.

Similarly a study conducted by Kasse & Balunywa (2013) highlighted technophobia among the prominent challenges of students during using eLearning. Technophobia is an agent of fear specifically for the uses of ICT and other related IT tools and infrastructures. Correspondingly, the researcher informed students that...even some of them are not comfortable with eLearning because it seems that the available ICT infrastructure is biased for only people having personal computers”.

In addition to that, the librarians informing a researcher that “...some teaching staff prefers the blended learning in favor of students who are relied only with the traditional mode delivery due the lack of the prerequisite ICT skills....”, in which sometimes the students necessitated to bring their passwords asking librarians to download content for them or asking librarians assist on viewing the assignment in Moodle” a librarian told a researcher during an interview.

Quality of ELMS Moodle at CBE

On the other arrows, the researcher wanted to measure the quality of eLearning relative to the usability of eLearning to students. Based on the finding most of the students (81.21%) revealed that the system at the college is not easy to be used specifically in uploading and downloading the contents. Similarly, the postgraduate students revealed that the system is not user friendly (18.76%), since it is difficult to upload and download contents, while others added that the system is difficult to log in (57.52%). Measuring the qualities of any system depends on its relevance, conciseness, usability, accuracy, currency, completeness, usability and timeliness (DeLone & McLean, 2016). In this regard, ease to use, reliability and relevance of the available information is among factors which motivate users’ to use the systems (Abaidoo, 2015). A Student during an interview told a researcher that...sometimes it became difficult to access

contents because students' needs special rights and credentials to login which sometimes is not easy to remember.... The ELMS Coordinator added that... the eLearning system is still relevant which has very up-dated contents that are simplified in the PPT formats.... “

Table 6: Quality of ELMS Moodle at CBE

Ranking of the Quality of ELMS Moodle adopted at CBE

Responses	Frequency	
	Yes	No
Simple to use	10(1.87%)	100(18.76%)
Easy to upload and download	97(18.19%)	297(57.52%)
Easy to log in	20(3.75%)	200(37.52)
Easy for self-orientations	0(0%)	4(0.75%)
Easy to interact with	0(05)	2(0.37%)

Strategies employed by the college to institutionalise eLearning in a surveyed area.

The interviews with ELMS coordinators denoted that the college employs various strategies to make eLearning happen, strategies denoted were; on ensuring availability of reliable tools; ensuring there is the reliable connectivity; ensuring frequently technical supports; preparing and put guidelines for the eLearning usages and increasing bandwidth capacity. Similar strategies was noted in various studies, for example (Al-Ghaith, 2010; Balunywa, 2013; [Bhalalusesa](#) & Clemence (2013).

The second objective was to identify challenges that hinder ELMS Moodle acceptance among in a surveyed area.

There are a number of challenges facing scholars regarding successful use of eLearning in tertiary institutions. Based on the findings, the discussion in this part is divided into the four categories: Challenge based on cultural learning style, challenges based on the pedagogical and technological eLearning issues and challenges related to the lack of technical training and time management.

Challenge on Cultural Learning Style

Every society has its own cultural learning influence styles alone. According to Sywelem *et al.* (2012) the ones who teach using the natural learning styles while considering individual cultural aspects will succeed academically. Based on the findings, the majority revealed that they are facing technological challenges (51%). This challenge had the implications for the students towards learning style and attitudes of using eLearning. According to Banning (2015) there are various cultural learning methods which have to be considered. The study (Ibid) mentioned four cultural learning styles namely; didactic, facilitative and Socratic and the experimental. Among these four approaches Qureshi *et al.*, (2012) recommended usage of didactic methods, which use more traditional techniques. This mostly is a physical lecture that involves the teacher's centred approach. These are traditional methods enabling them to listen to their teachers while taking their own notes. Similarly, Walkin (2000) & Onasanya *et al.*, (2010) suggested continuing using such a traditional way of teaching, because it is more user friendly and economical. In connection with that Onasanya *et al.*, (2020) supported using a so called didactic teaching approach which is a very strong teachers' knowledge centred, as Qureshi *et al.*, (2012) viewed all of these are cultural acceptance methods. During the interview with the eLearning coordinator f they were associating the organisation culture and lack of time to prepare contents to be uploaded in eLearning. For example, one librarian told a researcher that "... this is the new teaching and learning culture in the organisation, we need more time to adopt it ...". The ELMS coordinator cemented that "...Self-motivation is an essential tool for the implementations of eLearning". This, also emphasises by Makokha, & Mutisya (2016) that, when new enrolled in the distance learning platform, needs time to comprehend otherwise, they will fail to cultivate

and give up. In this regard, only a positive attitude towards self-Orientation of eLearning will help students to overcome challenges, though it is difficult practice.

ELearning Pedagogical and Technological challenges

Based on the findings, the majority of students (81.44%) revealed pedagogical and technological challenges towards eLearning. Pedagogical refers to how knowledge and skills are communicated in the educational context, and to be considered as a tool for the interaction among students and teaching staff during the practical learning. Onasanya *et al.*, (2010) associating lack of eLearning pedagogy with the lack of management and commitments as well as ICT training that supports the students. Likewise, a study by Sanga *et al.*, (2013) denoted unnecessary delays in purchasing and maintaining technologies and prerequisite equipment that supports eLearning in academic institutions. During an interview with eLearning coordinators emphasizes that; “....It is very difficult to implement eLearning since it needs the proper management and the professional development which is focusing on content knowledge, pedagogy skills. All of these are assisting to raise morale by using eLearning. As Mtebe & Raisamo (2011) refer to the pedagogical challenge as the personal barriers that are linked with the adoption of eLearning and usages. Literature showed that most teaching staff and in the institution of higher learning ignore the effects of eLearning to teaching and learning, so they are likely to resist using it (Avidov-Ungar & Eshet-Alkakay, 2011). Also, resistance or difficulty to change among students has also been cited as an individual influence that affects adoption of eLearning (Garrison 2011; Nihuka & Voogt, 2012). Rolfe *et al.*, (2008) associated with resistance to cultural attachment, where teaching staff and habituated with the old-style of learning that made resistance to change.

During the interview with librarians they inform a researcher that ‘...teachers need more time for training regarding assessing and grading ' assignments specifically in managing large classes online....’. The main pedagogical strategy used by instructors to students is on uploading assignments and downloading the contents....’. Conversely, Nihuka & Voogt (2012) associating reluctance of students with the technological access factors that make them fail to put contents into electronic format (Buabeng-Andoh, 2015). This was noted even to the teaching staff who are competent on practical substructures on systems, but they do not implement or engage such strategies during online teaching. Similarly, Saekow & Samson (2016) denoted lack of ICT

skills, which was also revealed in all campuses in CBE campus respectively. Informed the researcher that” There are some difficulties in handling technological mediums which could motivate us to follow the new educational trends, which would not equip us to meet future challenges relative to eLearning.....”. Pedagogical and Technological challenges of eLearning are also associated with the lack of motivation, incentives and technophobia (Nkebukwa, 2018). During the interview with ELMS coordinators and librarians they provided the similar information that ...” challenges of eLearning occurred due the digital divide and the technological gaps based on the students backgrounds...”. The digital divide among eLearning users was also revealed by (Teo & Ursavas, 2018). Nonetheless, various studies noted incapably ICT infrastructure among the prominent limiting factors of eLearning implementations in the academic institutions (Rajesh, 2003; Burn et al., 2005& Siritongthaworn et al., 2016). Similarly, Bon (2017) added that, poor infrastructure limits qualities of the connectivity which negatively affects eLearning usage.

Lack Technical Training and Time Management challenges

Based on the finding both technical training and time management were mentioned. Here there is a concern on how the college management put an effort in supporting the teaching functions, specifically where eLearning is new and its users are ICT literate. In such a situation there is a need to put more emphasis on the eLearning guidance and the administrative support. This is in line with the study by Salmon (2014); Kasse & Balunywa, 2017) who also emphasis on training of the technological features of the systems which is the first step for eLearning success. In this regard the absence of eLearning training results in students to lack prerequisite technical skills that could help them in using eLearning tools effectively. Similarly, this circumstance confirmed during the interview with ELMS coordinators regarding the technical training, they informed that: “...although the practical expertise on accessing eLearning is provided but most students have very poor background in computers.....”. In the same vein the librarians added that; “.....lack of computer skills is a major issue at the college, not only for eLearning but even on accessing the library databases”. According to Kasse & Balunywa (2016) the basic computer literacy courses is Important since it enhances students in obtaining the practical knowledge needed. Tarus (2016) added that, eLearning in the rest of African universities and colleges is still at the infancy stages due a number of challenges hindering its implementations.

Among other challenges is ranging from technological difficulties, lack of institutional and pedagogical challenges (Kasse & Balunywa 2016). However, other studies made the general conclusion that there is still a negative perception of eLearning in many institutions. (Allen, 2018), understanding and lack of trust (Ajzen, 1988) or conflicting agendas towards the appropriate usage of technologies (Beebe, 2014).

Table 8: Challenges on acceptance of ELMS Moodle by students the in tertiary institutions (Multiple responses Question)

Reponses	Respondents	
	Yes	No
Challenge on cultural learning style	90(16.88%)	20(3.75%)
Technological challenge	200(37.52)	20(3.75%)
eLearning pedagogical challenges	100(18.76%)	97(18.19%)
Technical training	4(0.75%)	0(0%)
Time management challenges	2(0.37%)	0(05)

Conclusion

Based on the findings of this study both students and teachers have equal responsibility to make eLearning work. By the time students are facing any limitation in a system, instructors have to solve them. The study revealed still there are the negative factors associated with the acceptance of eLearning among students, these were; the limited infrastructure to support internet connectivity; there are few connected computer laboratories supporting eLearning usage. It has been also noted there is inadequate plan and preparations for this new eLearning learning approach. The study further denoted inadequate institutional access to the internet, of which students have to rely on their personal initiatives using smart phones and laptops which are not

easily affordable. However, the majority of teaching staff have access to the internet but they are not fully utilising the eLearning system. It was also revealed that libraries have inadequate computers that would also provide opportunities for accessing eLearning in libraries. There is a need, therefore, to equip libraries with sufficient computers where they are lacking, and equipping librarians and instructors with relevant and up-to-date eLearning knowledge to enable them to assist students.

Specifically, the study recommends the following

i. *eLearning awareness creation campaign to students*

Awareness raising campaigns on eLearning usage should be carried out, targeting all stakeholders such as instructors, students and the librarians.

ii. *Increasing budgetary allocation for the institutional supports eLearning*

The budgetary allocation for eLearning should be increased so as to enable the institution to acquire enough/adequate prerequisite equipment supporting technical infrastructure to motivate the students' acceptance and usage of eLearning Moodle.

iii. *The establishment of the computer laboratories in the institutions*

Adequate computer laboratories should be equipped with adequate numbers of up-to-date hardware and software to make eLearning work. The use of free local area networks will enable students to use personal laptops or smartphones without restrictions and extra cost.

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The critical factors influencing employee usage of e-learning in workplaces in Tanzania. A systematic scoping Reviews

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Abstract

Technological advancement in Information and Communication Technology (ICT) has given rise to e-learning technologies to become a substantial component of training and development within numerous organizations. In Tanzania, organizations such as financial institutions have taken several initiatives to implement e-learning among their training methods. Despite the efforts, the usage of these e-learning technologies is still low in workplaces. Furthermore, the factors for this low adoption and use are yet to be known. This study aimed to identify the critical factors that influence employees' usage of e-learning in workplaces and propose a conceptual framework in the context of Tanzania. This research develops from a thorough literature review process over the past twelve (12) years based on four electronic databases. It also used the google scholar search engine and specific keywords to search the literature from 2009 to 2021.

Findings indicated a limited literature on e-learning in workplaces in Tanzania, with great emphasis and a vast body of research on e-learning given to higher education. The results further showed that computer self-efficacy, organizational factors, subjective norms, system quality, perceived enjoyment and anxiety were factors influencing the usage of e-learning in workplaces. This study contributes to the literature and related debates on e-learning for the financial-related workplaces in Tanzania. It further contributes inputs in framework development for understanding e-learning in financial workplaces.

Keywords: e-learning, systematic scoping study, critical factors, workplace, framework, Tanzania.

Introduction

Background

Electronic learning or e-learning has transformed the traditional face-to-face classroom delivery method to education and training, this is the result of continual revolution in information and communication technology (ICT). The usage of e-learning, which has traditionally been associated with educational institutions, has extended to include a variety of business organization and public entities (Hashim and Tasir 2014). The advantages of e-learning in workplaces have been reported in previous studies to include cost savings for example costs involved during travel and other expenditures such as renting hotels. Other advantages are like self-paced learning for employees, flexibility in training delivery, lifelong access to training contents within the organization, and an increase in productivity as a result of more trained workers in the organization (Purnomo & Lee, 2013; Cheng et al., 2012; Kuznia & Ellis, 2014).

Numerous studies have been conducted on e-learning technologies adoption and usage in developed countries. Numerous factors have been reported to influence continuous usage of e-learning technologies in workplaces. However, findings from these studies may not be applicable to developing countries like Tanzania because national culture is likely to have a great influence on the use of technology (Rouibah 2008). In addition, these developed countries are advanced in terms of information and communication technology usage.

Furthermore, most of the studies on e-learning conducted in Tanzania are focusing on educational sector like secondary schools and higher learning institutions (Lashayo & Johar, 2017; Lwoga, 2012; Ngeze, 2017; Mtebe & Raphael, 2018; Mtebe, 2020). These studies have incorporated several technology acceptance models such as DeLone and McLean (Delone and Mclean 2003), Technology Acceptance Model (TAM) authored by (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al. 2003) to explore different influencing factors for educational institution's acceptance and use of e-learning technologies. In these prior researches, instructors or students were mostly the key respondents in the studies. It is known that employees learning needs are different from students learning needs. Therefore, factors influencing employees' usage of e-learning for learning and training

purposes are different from those of students or instructors in education sectors.

Although much is known about the factors influencing the usage of e-learning in education sector (colleges, universities and secondary schools) yet, very little is known about it in workplace e-learning. Therefore, this paper departs from the earlier studies in Tanzania by focusing on critical factors influencing employees' usage of e-learning in workplace context. Furthermore, a conceptual framework for e-learning usage in Tanzania is developed from this study.

Additionally, e-learning is still a brand-new initiative in organizational context in Tanzania and Africa in general. There are few frameworks to direct its uptake and usage (Zainab et al. 2015). Without a thorough awareness of the of factors that influence employee's intention to use, e-learning will not be fully adopted or it will take longer than necessary to utilize it in organizational context in Tanzania.

E-learning in Workplace

Numerous of researches have been conducted on factors affecting the usage of e-learning in workplace context in developed countries. For example Purnomo & Lee (2013) extended TAM (Technology Acceptance Model) to include five factors to check if are significant in affecting the employees decision to use e-learning in banks. The results indicated that computer anxiety, prior experience, management support, and compatibility have more power to influence employees behavioral intention to use e-learning technologies in workplaces. Also, Rulevy & Aprilianti (2021) extended TAM to include five factors to measure employees' intention to use an e-learning. These factors were such as computer self-efficacy, goal orientation learning, management support, satisfaction and enjoyment. The results show that all factors had direct or indirect positive effect on the employee's intention to use e-learning systems. In addition, Teoh & Tan (2020) used TAM to identify the factors that influence Malaysian manufacturing engineers' behavioural intention to use e-learning at work. Two factors which are computer self-efficacy and prior experience were included in their study. Results show that all of the direct relationships were significantly supported excluding prior experience which did not have influence on perceived ease of use of e-learning system.

In Tanzania, the number of e-learning systems has significantly increased as the method to train employees in the organization. Therefore, this study will focus on trying to find the critical

factors that impact employee's usage of e-learning in workplace in Tanzania.

Study objectives

In this review we focused on trying to find the critical factors that impact employee's usage of e-learning in workplace context. In doing so, we were guided by the following research questions: What are the critical factors that influence employee's usage of e-learning in workplace in Tanzania?

Method

To be able to study the critical factors influencing employee's usage of e-learning technologies in workplace, relevant published articles linked with e-learning use in workplace context were systematically reviewed. The conducted systematic literature review protocol was done as suggested by Brereton et al. (2007). Brereton et al. (2007) suggested that, there should be three key stages in order to identify related articles which are relevant to your study: Phase one starts with review planning, conducting the review is phase 2 while phase three is review documentation as revealed in Figure 1 below.

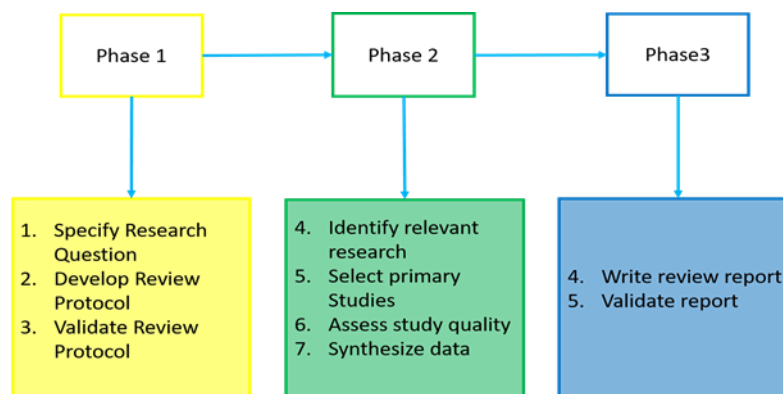


Figure 1 Research methodology, source: Brereton et al., 2007

Planning the review

In order to plan an effective review a research question was specified. Therefore, the research question for this study is as follows: What are the critical factors that influence employee's usage of e-learning in workplace in Tanzania? Criteria for searching was done, published articles between 2009 and 2021 were searched. Published articles written only in English language were included in the review process. Keywords were selected according to the proposed question as

shown in table 1. Additional phrases such as “factors affecting e-learning use in workplaces” and “employee use of e-learning in workplaces” were incorporated in the search. Published articles were identified from four journals databases: Proquest, Emerald Insight, ScienceDirect and JSTOR, also search engines (Google Scholar) was used in the search. The search was conducted in October 2021.

Table 1. Keywords Used in the Search

Keyword	Boolean	Additional Keywords
Technology Acceptance Model (TAM)	AND	E-learning
Workplace, TAM, employees, workplace, organizations, TAM2, TAM3	AND	E-learning, LMS, web-based learning, online learning, e-training, distance learning, blended learning.

Conducting the review

The systematic analysis of each article was conducted in order to make sure they contain relevant discussion on factors affecting employees' intention to use of e-learning technologies in the workplace. Published papers that included information on effectiveness, implementation or impact of e-learning or had a minimal consideration of the factors affecting how employees use e-learning and were left out. In addition, while performing reviews, duplicate studies were excluded, studies which used qualitative method that had extensive information, like e-learning outcomes, or those which appeared to rely much on the researcher's experience instead of the field observations were removed.

Furthermore, studies' titles and abstracts were reviewed, and publications that were not relevant were disqualified. 26 papers were chosen from 116 that were found in the literature review. In order to locate papers of highest quality relating to the parameters of this study, inclusion and exclusion criteria was created as shown below. After having inclusion and exclusion criteria, the retrieved results were narrowed down and picked for analysis under the following conditions:

- i. Published articles are written in English language

- ii. Must be published in the past twelve (12) years.
- iii. Peer-reviewed and published by authoritative publishers
- iv. Peer-reviewed articles and published by authoritative conferences
- v. The published articles must have Technology Acceptance Model (TAM) in an empirical study.
- vi. The published articles should have discussions on usage of e-learning technologies in workplaces only.
- vii. The proper description should be given of the study methodology.
- viii. The results of the study should be completed and given.

Additionally, when examining publications from prestigious journals, a step further was taken to identify other articles through by checking the bibliographies of previous important articles to explore if other relevant paper can be found. As a result, one more article relevant to this research was found. This made the total of articles found to be 27 (see below Table 2). After this desktop search, content analysis was conducted. Each study's critical factors were coded, and the content was coded accordingly.

Review documentation

The process of extracting and charting the results obtained after getting the twenty seven (27) papers, a 25-columns excel table was used to study the factors influencing employees usage of e-learning occurred in each article. These obtained results are shown below in table 2. The citation is incorporated in the table, as well as a list of critical factors which include Computer self-efficacy (CSE), Management support (MS), Organization support (OS), Triability (TR), Subjective norms (SN), Complexity (CPL), Perceived enjoyment (PE), Task equivocality (TE), Prior Experience (PEX), Facilitating conditions (FC), Social influence (SI), Relative advantage (ADV), Anxiety (AN), Observability (OB), Image (IMG), Compatibility (CPM), Perceived behavioral control (PCB), System quality (SQ), Learning Goal Orientation (LGO), Information quality (IQ), Content quality (CQ), Job relevance (JR) and other factors which appeared only once as indicated in the last column of the table. The critical factors that occurred in each investigation are highlighted with a tick in each article. In addition, as shown in Table 2, each critical factor was classified according to the frequency with which it appeared in all of the gathered research articles.

Table 2: Literature review of e-learning in Workplaces

Indicated Critical Factors for E-learning usage in Workplaces										
SN	Study	Country/ Continent	Model	CS E	M S	OS	TR	SN	CP L	PE
1	Chatzoglou et al., 2009	Europe	E-TAM	✓	✓					✓
2	Chinyamurindi & Louw, 2010	South Africa	E-TAM	✓						
3	Y. H. Lee et al., 2010	Taiwan	E-TAM	✓	✓	✓		✓		
4	Chuo et al., 2011	China	E-TAM	✓		✓				
5	Park et al., 2011	South Korea	E-TAM			✓				✓
6	Shyu & Huang, 2011	Taiwan	E-TAM							✓
7	Karaali et al., 2011	Turkey	E-TAM							
8	Y. H. Lee et al., 2011	Taiwan	E-TAM	✓		✓				
9	A. Y. Lee et al., 2011	Taiwan	TAM & IDT				✓		✓	
10	Hsia et al., 2012	Taiwan	E-TAM	✓						
11	Calisir et al., 2013	Turkey	E-TAM							
12	Purnomo & Lee, 2013	Asia	E-TAM	✓	✓					
13	Veloo & Masood, 2014	Malaysia	TAM & IDT				✓		✓	
14	Weng et al., 2015	China	E-TAM	✓	✓					
15	Mangir et al., 2016	Malaysia	TAM & TPB	✓	✓			✓		
16	Esterhuyse & Scholtz, 2016	South Africa	E-TAM	✓						✓

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17	Rui-Hsin & Lin, 2017	Taiwan	TAM & IS SUCCESS							✓							
18	García et al., 2018	Spain	TAM 3	✓						✓							✓
19	Maga et al., 2019	Cameroon	TAM & UTAUT							✓							
20	Teoh & Tan, 2020	Malaysia	TAM & SCT	✓													
21	Alkali et al., 2020	Cameroon	E-TAM	✓					✓								
22	Usman et al., 2020	Asia	E-TAM	✓													✓
23	Ali & Alias, 2020	Malaysia	TAM & TPB						✓	✓							✓
24	Jabeen, 2020	United Arab Emirates	E-TAM	✓													✓
25	Khrais & Alghamdi, 2021	Saudi Arabia	TAM & UTAUT														
26	Rulevy & Aprilianti, 2021	Asia	E-TAM	✓					✓								✓
27	Zamzami, 2021	Saudi Arabia	ETAM	✓													
Frequency factors				17	7	6	2	8	2	6							

Table 2 continues

Indicated Critical Factors for E-learning usage in Workplaces																
S	T	PE	S	F	AD	A	O	IM	CP	PB	S	LG	IQ +	J	Factors	
N	E	x	I	C	V	N	B	G	M	C	Q	O	CQ	R	appeared	only

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once									
1			✓				✓		
2									Gender
3	✓	✓							Task Independent
4			✓						
5		✓	✓				✓	✓	
6									Perceived e- government learning value
7		✓	✓	✓					
8	✓	✓							
9			✓	✓	✓				
10									Locus of control
11			✓	✓			✓	✓	
12	✓		✓		✓				
13			✓	✓	✓				
14									
15							✓		Training
16		✓							
17							✓	✓	✓ Service quality
18			✓	✓	✓	✓			✓ Playfulness
19		✓		✓			✓		
20	✓								
21									
22									
23							✓		

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24					✓					✓					Technological support (TS)
25		✓	✓												
26										✓					
27						✓									
	2	4	4	3	2	9	2	3	3	3	6	2	3	2	

Results

Critical Factors influencing employees' usage of e-learning technologies

This part shows and discusses the analysis of critical factors on present literatures. The conceptual framework will be created based on these critical factors. Analysis of various factors from a number of published articles in different countries was done. Using content analysis methodology, the frequency occurrence of the factor was calculated and indicated in the table 2 below. All factors that appeared in more than 20% of the literature are classified as critical factors. The summary for these critical factors is given below (see Table 3).

Table 3: Summary of the critical factors

SN	Critical Factors	Literatures
1	Computer efficacy	Self- Chatzoglou et al., 2009; Chinyamurindi & Louw, 2010; Y. H. Lee et al., 2010; Chuo et al., 2011; Y. H. Lee et al., 2011; Hsia et al., 2012; Purnomo & Lee, 2013; Weng et al., 2015; Mangir et al., 2016; Esterhuyse & Scholtz, 2016; García et al., 2018; Teoh & Tan, 2020; Alkali et al., 2020; Usman et al., 2020; Jabeen, 2020; Rulevy & Aprilianti, 2021; Zamzami, 2021.
2	Organizational factors (MS, OS & TS)	Chatzoglou et al., 2009; Y. H. Lee et al., 2010; Chuo et al., 2011; Park et al., 2011; Y. H. Lee et al., 2011; Purnomo & Lee, 2013; Weng et al., 2015; Mangir et al., 2016; Alkali et al., 2020; Ali & Alias, 2020; Rulevy & Aprilianti, 2021.
3	Anxiety	Chatzoglou et al., 2009; Chuo et al., 2011; Park et al., 2011; Karaali et al., 2011; Calisir et al., 2013; Purnomo & Lee, 2013;

		García et al., 2018; Jabeen, 2020; Zamzami, 2021.
4	Subjective norm	Y. H. Lee et al., 2010; Mangir et al., 2016; Rui-Hsin & Lin, 2017; García et al., 201; Maga et al., 2019; Usman et al., 2020; Ali & Alias, 2020; Jabeen, 2020.
5	Perceived Enjoyment	Chatzoglou et al., 2009; Park et al., 2011; Shyu & Huang, 2011; Esterhuyse & Scholtz, 2016; García et al., 2018; Rulevy & Aprilianti, 2021.
6	System Quality	Park et al., 2011; Calisir et al., 2013; Rui-Hsin & Lin, 2017; García et al., 2018; Maga et al., 2019; Jabeen, 2020.

Computer Self-efficacy

In the context of e-learning in workplaces, “Computer Self-efficacy” is the most dominant external factor influencing employees’ use of e-learning technologies. Out of the 27 studies analyzed, 17 studies included computer self-efficacy as their external variable (Teoh & Tan, 2020; Chinyamurindi & Louw, 2010; Hsia et al., 2014; Y.-H. Lee et al., 2012; Alkali et al., 2020; Purnomo & Lee, 2013; Esterhuyse & Scholtz, 2016; Usman et al., 2020; Chuo et al., 2011; Weng et al., 2015; Jabeen & Sadique, 2020; Mangir et al., 2016; Cheng et al., 2012; Chatzoglou et al., 2009). Self-Efficacy refers to people's judgment of his or her own capability to exercise control over a specific task (Bandura, 1982, p.391).

In context of computer usage, Computer Self-Efficacy is defined as “One's belief about his/her ability to accomplish a particular task using a computer” (Shen & Eder, 2009, p.226). Individuals will always tend to avoid things which are too complex or things which they believe that they don't have technical ability to use them. This is true when it comes to computer self-efficacy, individuals behavioral intentions to use certain technology is likely to be influenced by computer self-efficacy (Abdullah and Ward 2016). This suggests that employees who have higher e-learning Self-Efficacy are more likely to use e-learning and employees who have lower e-learning Self-Efficacy might avoid using it.

Organizational factors

From our findings, three factors organizational support, management support and technical support have been combined as organizational factors. Organizational factors, are termed as one

of the most dominant factors in influencing e-learning usage among employees. Management support refers to “the perceived level of general support for e-learning provided by top management which includes encouragement and resource support” (Cheng et al. 2012). Giving the needed support for e-learning use to employees, most importantly to the employees with inadequate computer/internet skills or knowledge could enhance their chances of usage (Alkali et al. 2020). Technical support refers to the people assisting the learners with computer software and hardware products (Jabeen 2020).

Anxiety

Anxiety is defined as an uncontrollable emotion, such as anxiety or feelings of intimidation when using a specific system (Chuo et al., 2011; Compeau & Higgins, 1995; Park et al., 2011). When people use the computer or internet, some feel apprehensive towards the use of such technologies (Yousafzai, Foxall, and Pallister 2007a). As a result of being anxious or feeling uneasy when using a specific system, users have a tendency to keep negative perceptions towards the system, and may not use it and feel unsatisfied (Chuo et al. 2011).

Subjective Norms

Subjective norm is also a significant factor affecting intention to use e-learning technologies in workplaces. Subjective norm is defined as the important people around user of a certain technology (Yousafzai et al., 2007). It can be either social influence or peer influence to the people on using or adopting a particular technology because individual's decision to use a certain technology may be influenced by people who thought are important to them such as colleagues, friends and family (Abdullah and Ward 2016). Therefore, subjective norm influences the intention to use technology either positively or negatively. In an organization, employees may perceive a technology to be more useful in helping to achieve related goals in the job if others in the organization, such as managers, recommend the use of such technology.

Perceived Enjoyment

Perceived Enjoyment is situation of feeling joy about using or adopting a certain thing or technology (Yousafzai et al. 2007a). Perceived enjoyment as one of external variable in TAM can predict the usage of e-learning technology in workplaces (Chatzoglou et al. 2009). Individuals may enjoy using technologies due to their features or support service given by technologies,

apart from any performance related benefits that may be anticipated (Esterhuyse and Scholtz 2016). Therefore perceived enjoyment directly affects employees' intention to use e-learning technologies in workplaces.

System Quality

Several studies have reported that system quality has influence intention to use a variety of technology applications including e-learning (Park et al. 2011). System quality is defined as “the individual's perception of ease of use, responsiveness, and stability of an information system” (Park et al. 2011). According to the IS success model developed by DeLone and McLean (Delone and Mclean 2003), system quality is a key measure of the information system process itself . Several studies have reported that system quality has positive significant relationship with perceived usefulness (Park et al. 2011). In the context of e-learning in workplace, system quality can therefore be hypothesized as it has a positive relationships between both perceived usefulness and perceived ease of use.

Conceptual Framework

In e-learning adoption literature, numerous models have been proposed to analyze and explain adoption and the contributing factors for acceptance and usage of e-learning. The most well-known of these is the technology acceptance model (TAM) which was first introduced by Davis (1989). TAM is an extension of the theory of reasoned action (TRA). TAM is broadly used in information systems to predict and describe the causal relationship between usefulness of the system and ease of use of a system, users' attitudes, users' intentions, and the actual usage of the system (Rahimi et al. 2018). The basic model presumes a mediating role of perceived usefulness and perceived ease of use in association between external variables and system usage as shown in Figure 2.

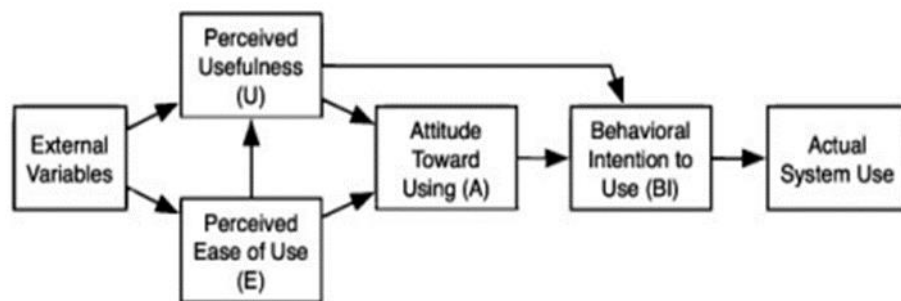


Figure 1: The basic technology acceptance model (Davis, Bagozzi, and Warshaw 1989)

TAM suggests that two belief structures determine an individual's desire to use information technologies: Perceived Usefulness (U), the belief that using information technologies will improve one's work performance, and perceived ease of use (E), the belief that no substantial effort will be spared to use information technologies (Venkatesh et al. 2003). The major factors of system utilization are the theoretical structures PU and PEOU (Davis, 1989).

The majority of empirical research has indicated that U is a reliable predictor of adoption and usage intention, but E has a less consistent influence (Venkatesh and Davis 2000). It is expected that the 'attitude' variable will somewhat mediate the influence of these beliefs on intention to use. Nonetheless, studies suggest that attitude plays no role in explaining the causal link between belief systems and intention to use. (Davis et al., 1989).

Despite the fact that TAM has been empirically validated, researchers continue to add new external factors to improve the limited specificity and explanatory utility (Baki, Birgoren, and Aktepe 2018). It is critical to incorporate more variables or integrate the model with other information technology models or theories to improve the model's explanatory power. Researchers, particularly in the field of e-learning, are expected to extend and evaluate theoretical acceptance models with a variety of external variables (Šumak, Heričko, and Pušnik 2011). Therefore most occurring external variables from this systematic review will be included as the external variables including computer self-efficacy, organizational factors, anxiety, subjective norms, enjoyment and system quality.

Discussion

More recently, there has been an increasing interest in the application of various e-learning technologies in the workplaces to facilitate learning and training activities (Balakrishnan et al. 2021). However, the benefits of an e-learning cannot be fully realized until learners use it (Jimenez et al. 2021). This low adoption and usage of e-learning technologies normally is described as technology failure (Venkatesh and Davis 2000). Therefore, the objective of this paper is to assess what are the critical factors that influence e-learning usage among employees in workplaces in Tanzania.

The results of conducted systematic literature review of existing studies that assessed the factors

which influence of e-learning usage in workplaces show that there are a number of critical factors for adoption and usage of e-learning in workplaces. Significant factors highlighted include computer self-efficacy, organizational factors, anxiety, subjective norms, enjoyment and system quality.

However, from this study it was observed that most of the literatures studied were coming from developed countries which are advanced in terms of technology usage. Since the obtained results are from developed countries, the task ahead in the future is to validate empirically if the observed critical factors are valid or not valid in Tanzanian workplace context. Additionally, since the proposed conceptual framework is going to be used in Tanzania context, there is possibility to have some modification or extra critical factors that are important as shown in the conceptual framework. Lastly, it is important to validate the results this study's proposed framework in the field with employees as respondents.

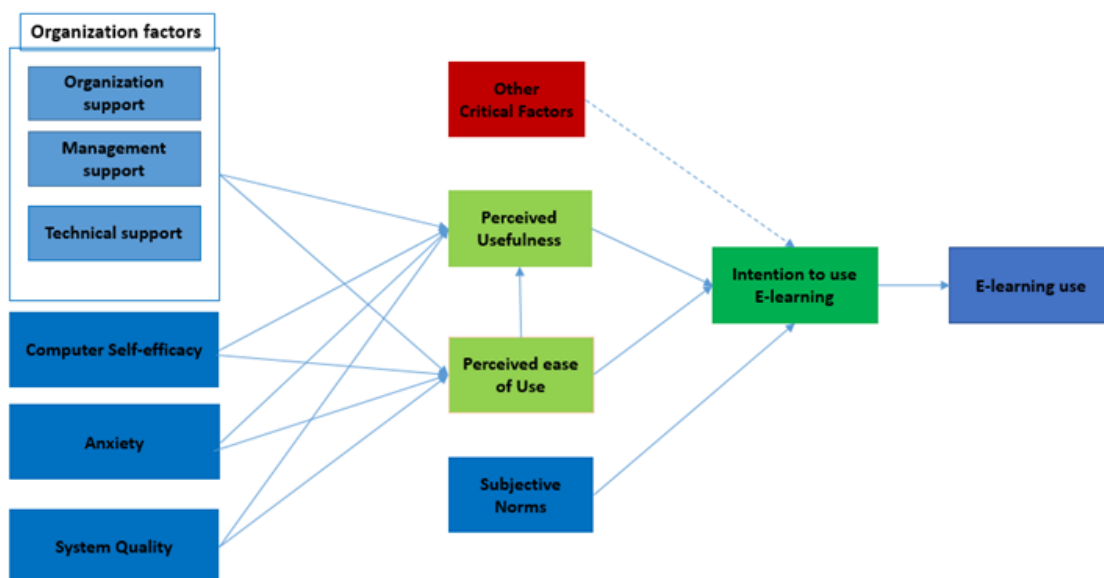


Figure 3: Proposed conceptual framework.

Conclusion, Implications and the area for further Research

Implications and Area for Further Research

This study has several significant implications for research, first, this study seek to extends the literature of e-learning usage in other contexts such as in workplaces with employees as the key

respondents apart from educational sector which focus much on the students and instructors. Second, this study has proposed a conceptual framework to address the critical factors for e-learning usage in workplaces environments as the primary theoretical contribution of this study.

Moreover, this study also provides some fundamental implications for stakeholders, experts, including government agencies, since the results from the external variables that influence perceived usefulness, perceived ease of use, and intention to use, need to be taken as vital factors in the process of designing, implementing, and operating e-learning systems.

Conclusion

The review of related scholarly works has shown that there is little evidence of research studies that identify the critical factors influencing the employees' use of e-learning in African developing countries. In order to have maximum utilization of e-learning technologies in workplaces, there is a need first to understand the critical factors that influence the usage. The results of applying the TAM are frequently believed as predictors of usage and adoption well beyond the point of validation. However, the actual usage of the technology, rather than intention to use, is rarely checked. This conceptual framework aims to investigate whether the TAM is a reliable predictor of actual use, rather than intention to use.

This paper is conceptual in nature. It was instigated by the absence or little researches that critically examines and explains the systemic influences on how e-learning is used in Tanzanian workplaces. Such critical analysis and explanation will provide important ideas in the process of designing, implementing, and operating e-learning systems. Therefore, it will guide the successfully utilization of e-learning technologies in workplaces in Tanzania.

Like any other study, this study also had limitations, particularly as it is continuing research. The researchers needs to go to the field to validate the proposed model. First, analysis was conducted only on secondary sources of data, so primary data should be collected and analyzed (which is the next thing the researchers are going to do) for the results of this study to be taken as complete. Secondly, the conducted review of the existing literature was based only on the TAM model and published articles were identified from four electronic databases and one search engine google scholar. Future researchers might explore additional related journals and databases with the use of other keywords combination. Moreover, the study emphasizes that, in spite of the collected critical factors, other critical factors might not have appeared in this study. Further empirical

research is needed to test the relationships between the variables after getting responses from the field. This will give a good insight of how these variable affects direct or indirect the usage of e-learning systems in workplaces in Tanzania.

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Factors Influencing Employees Adoption of Information System Security Policies in Public Organization in Tanzania

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Abstract

The Purpose of the study was to find out the factors influencing the adoption of information security policies on public organization in Tanzania. In undertaking the study was guided by the Technology Acceptance Model (TAM) integrating it with the Technology-Organization-Environment framework (TOE), in order to increase the explanatory power of the studied model. The study employed the Survey strategy in data collection by administering the questionnaires. A sample of 93 respondents was drawn from the population under the study. Quantitative data was analysed based on descriptive statistical analysis and with inferential analysis by using multiple linear regression analysis. The findings of the study indicated that employees perceived usefulness has positive and significance influence on the the adoption of information security policies on public organization in Tanzania, while employees behavior intention and management support has no significance influence on the the adoption of information security policies on public organization in Tanzania, The findings of the study have indicated significant theoretical and practical implications for public organization on the effective the adoption of information security policies on public organization in the context of developing countries.

Keywords: *Information Security, employees Perceived usefulness, employee's behavior intention, management support, Technology Acceptance Model*

Introduction

Information Security refers to the protection of the information regarding policies, guidelines for achieving the organization goal of the organization (Szczepaniuk *et al.*, 2020). Information system security is important for any organization including public sectors. Its importance is due to the

fact that, it facilitates in accommodation of the tremendous technological advances in Information Communication Technology (Ahmed & Hikal, 2019).

Information security has been a big problem in many organizations, that affects the employee's performances particularly in developing countries (AlMindeel & Martin, 2021; Wirtz & Weyerer, 2017).

As per information security report of 2021 indicated around 79,635 million information system vulnerabilities and 5,258 million information thefts. There are increases of 26,635 million cyber security crime and 3042 million successfully data breaches compared to the data breach investigation report of 2018 (Data Breach investigative Report, 2021). Even though the cyber security crime is rising still there is lack of transparency in data breach notices at both the public institutions and government level mostly in developing countries (AlMindeel & Martin, 2021). According to Wirtz & Weyerer (2017) information system security vulnerabilities could have a negative impact on individuals, public sectors as well as governments. Richardson (2008) states that in the mainstream media computer hackers and criminals are often depicted, whilst evidence indicate that information security incidents more often occur due to actions of internal employees (Rahmi *et al.*, 2022). Since the system and data are stored in a data centre which are managed by the third party, this poses a risk of information privacy and mismanagement of stored data. In addition to that, system is accessible by the institutions which are connected to the Government network. The access to system from other network is done using Virtual Private Network, whereby if it not properly managed and configured the data may be exposed to unauthorised users (Enocson & Söderholm, 2018).

For despite that, there are extensive academic research in the adoption of the information system security policies striving to enhance of organization performances in the developed countries especially in United States, United Kingdom and Australia, little is known about the factors influencing adoption of information system security in the context of developing countries, particularly in Tanzania context (Al Mindeel & Martins, 2021; Chen *et al.*, 2012; Mshana, 2015). Furthermore, there is a growing body of literature concerning adoption of information system security in developed countries (AlMindeel & Martins, 2021).

In, 2018 the Government of Tanzania through e Government Authority and Ministry of Finance and Planning developed in-house information systems for asset, budget and integrated financial management. The use of these developed information systems for service delivery have started

and its deployment is going on to Government agencies and public institutions which are yet to implement these systems (URT,2020).

For despite that employees readiness on the adoption of the information security is of utmost importance in enhancing the efficiency of the information security system.(Jadmiko *et al.*, 2022). Scholars in developing countries, particularly in Tanzania indicated that, employees adoption is the challenge in enhancing the information security , for despite availability of the information security system software and hardware(Assefa & Tensaye, 2021; Wangwe *et al.*, 2010).The model regarding information security adoption which has commonly being used is the technology acceptance model (TAM) (Ajibade, 2018). The model has many studies in developed countries (Ajibade, 2018). Despite that, there paucity of studies guided TAM in assessing the influence of perceived usefulness, behavior intention regarding the factors influencing employees adoption on information security in public organization in Tanzania(Wangwe *et al.*, 2012). Therefore, this study assessed the factors influencing the employee's adoption on the information system security in Public Organization in Tanzania by integrating the TAM and TOE framework, hence adding a new construct of management support which is guided by the Technology organization environment framework (TOE).

Adoption of Information system security policies by employees in the organization are the fundamental requirements for the best protection of the information in the organization, that will give rise to enhancement of the organizational effectiveness in performances (Gulappagel & Shivakumar, 2017). The absence of that would have a negative effect on the performance s of both public and private organizations (AlMindeel & Martin, 2021). In the case of Tanzania, past studies have indicated that, there is a large problem on employees adoption in enhancing the information security , for despite availability of the information security system software and hardware(Assefa & Tensaye, 2021; Wangwe *et al.*, 2010).

There are abundant studies on the factors influencing employee's adoption of information security in developed countries (Kim & Han, 2018). However, there are scanty of studies in developing countries specifically in Tanzania (Mshana,2015; Wangwe *et al.*, 2010). Despite the presence of all these literatures specifically in developed context, hence scanty studies in the context of developing countries on what are the factors influencing employees adoption of

information system security adoption, as little is known in how perceived usefulness(PU), management support(MS) and behavior intention(BI) influence the employees adoption of information security in public Institution in Tanzania(Assefa & Tensaye, 2021; Wangwe *et al.*, 2010).. Also, it is theoretically unknown on how the constructs of perceived usefulness , perceived ease of use and management support influence the adoption of information system security in Tanzania(Assefa & Tensaye, 2021; Wangwe *et al.*, 2010).). For despite that TAM lacks the important factors that can influence individuals to adopt technology which are either psychological or physical influences(Chille *et al.*, 2021). As the reason as this study has integrated the TAM model TOE framework by adding the construct of Top management support (MS) on investigating the factors influencing employee's adoption of information system security on public organization in Tanzania.

Literature Review And Hypothesis

Perceived Usefulness(Pu) And Behaviour Intention(Bi)

Technology Acceptance Model (TAM) considers that individuals can plan on using technology without either an intrinsic or extrinsic influence. However, this is not happening and not plausible in different contexts of an individual or organization. Notwithstanding the fact that there are both psychological or physical influences that can influence behaviour on technology adoption(Asseffa & Tensaye, 2021; Chille *et al.*, 2021), Among these it can include the culture, management support and the personal level of understanding of the technology by a consumer (Lutfi *et al.*, 2022). This means that, when there is a new technology in the market, it is not necessary that individuals have information on product usefulness and ease of use (Ajibade, 2018; Davis, Bagozzi and Warshaw., 1989). This can bring to the attention that sometimes perceived usefulness and behavioural intention are not the only driving factors on adoption of technology (Rahmi *et al.*, 2022) . Therefore human behavior can not always be validated by empirical measurements in all situations as TAM posits (Chille *et al.*, 2021). With this context as there was a need of integrating the TOE in investigating on the factors that can influence the adoption of Information System Security policies adoption nin public organization in Tanzania.

There are also disparities in the previous studies on what are the factors influencing employee's adoption of information security policies. Some scholars found employees perceived usefulness, management support and behavior intention to have positive influence on employees

adoption of information system security(Kim & Han;, 2018;Lowry & Moody,2015; Merrit & Dhillon, 2016) while others have indicated that employees perceived usefulness, management support and behavior intention to have no influence on employees adoption of information system security(Lutfi *et al.*, 2022) In theoretical senses, this brings about the theoretical gap, on paucity on consensus on what influences adoption of information security policies calls for this study in Tanzania. As there scanty literatures regarding the effects of employees perceived usefulness, management support and behavior intention on the information security adoption in Tanzania (Wangwe *et al.*, 2010). The study unveiled the gap on the effects of employees perceived usefulness, management support and behaviour intention in influencing the adoption of information security policies on public institution in Tanzania. Therefore, the following Hypothesis were developed under this study

H1; Perceived Usefulness have a significant and positive towards adoption of information security policies by employees on public organization in Tanzania.

H2; Behavior Intention have a significant and positive towards adoption of information security policies by employees on public organization in Tanzania.

Management Support

When investigating employees adoption of the information system security policies in organization, it is imperative important to consider the roles of top management support of the individuals in the organization, it is imperative important for best technology adoption(Baker, 2018). Top management support can entice more individuals' adoption and proper designing of the research model and framework by practitioners that suits the contextual settings(Legris *et al.*, 2003). Therefore, this was the reason for the inclusion of the new construct of top management support as part of the objectives of this study.

Technological Organization Environment (TOE) framework allows to identify factors influencing the adaptation and use of various innovations for different technological, organizational and environmental contexts, therefore this is a good starting point on investigating on the factors influencing the adoption of information security policies on public organization in Tanzania. Therefore, TOE framework was integrated the Technology Acceptance Model (TAM) on assessing the factors influencing the the adoption of information security policies on public

organization in Tanzania. The variables regarding on the top management support on the influences on the adoption of information security policies on public organization was selected from TOE framework. From the above discussion therefore, the following hypotheses was developed.

H3; Management Support have a significant and positive influence towards adoption of information security policies on public organization in Tanzania.

Methods

Population and Sample

The population of this study were the Employees in public organization in Tanzania, in Dar es Salaam City.). Dar es Salaam City was chosen as the best location of the study due to its major contribution of about 70% of the GDP of Tanzania (Tanzania Invest, 2018), the study had 93 respondents. The study applied a Simple random sampling technique where every Public Organization employees in Dare s salaam who are Information system users had an equal chance of being included in the sample(Saunders *et al.*, 2012). The study examined the effect of employees perceived usefulness, employee's behaviour intention and top management support, as independent variables and adoption of information security policies on public organization in Tanzania. as dependent variable. Primary data was undertaken which consisted of 93 respondents. 100 questionnaires were distributed and 93 questionnaires were returned. Primary data were administered by using structured questionnaire. The pilot study was done before questionnaire are administered for data collection (Kothari & Carg 2014). The pilot study was done to improve the questionnaires, as the study administered questionnaires for pilot study to 30 public employees.

The variables were measured using a 5-point Likert scale with 1 implied Strongly disagree and 5 strongly agree. Adoption of Information Security Policies to public employees (AIS) was scaled by 7 items adapted from Davis (1989); Perceived Usefulness (PU) was adapted from (Davis, 1989; Kim *et al.*, (2010) measured scaled with 5 items; Behavior Intention(BI) was measured by 4 items adapted from Davis(1989) and management support (MS) was scaled with 4 items adapted from Maduku(2012)

Data Analysis

Demographic characteristics of Respondents

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The sample from the population were public employees of Public Institutions in Dar es salaam where 43(43%) were female and (50) 50 % of the respondents were male from 5 municipality in Dar es salaam, where 25 were from Kinondoni,15 ilala,18 kigamboni,26 ubungu and 8 were from Kibamba municipality

Results from Reliability test

For assessing the internal consistency of the outcome variable and observed variables, the reliability test was undertaken by using the Cronbach's alpha coefficient, And the results were 0.859 to 0. 919. Since the minimum cut off point is 0.7(Saunders *et al.*, 2012). This indicated that the questionnaire was conforming in assessing the intended constructs (Saunders *et al.*, 2012). In measuring the sample adequacy Kaiser Mayer Olkin (KMO) and Bartlett's Test for Sphericity (BTS) was used. and showed that KMO had value from 0.826 to 0.892 (greater than the cutoff point of 0.6n (Basto & Pereira,2012) . BTS had value less 0.001, thus showed the data were appropriate for factor analysis (Basto & Pereira, 2012).

Table 1: Reliability and Sample Adequacy

Construct	Reliability (Cronbach's alpha)	Number of items	K MO	BTS (P Value)
Adoption of Information Security System Policies (AIS)	0.919	7	0.826	<0.001
Perceived usefulness (PU)	0.902	5	0.892	<0.001
Behavior	0.898	4	0.877	<0.001

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Intention (BI)				
Management Support (MS)	0.858	4	0.837	<0.001

Source: Fieldwork, (2022)

Exploratory Factor Analysis Findings

Exploratory Factor analysis was done on adoption of Information Security Policies to public employees (AIS), Perceived usefulness (PU), Behavior Intention (BI), and Top management Support (MS) as indicated on the table 2. FA was undertaken by extraction and rotation and which resulted into single component rotations, and there was no component matrix rotated. The determinants (% of variance) were 3.72 (53.319), 3.544(50.632), 123 (76.741), 4.308(61.546) and 2.899(72.467) for the AIS, PU, BI and MS respectively. For each latent variable, the contribution from observable variables varied. Cut off point required is above 0.3, and the items having above 0.3 were retained for factor analysis (Basto & Pereira,2012). The results indicated that all variables were suitable for the studied objectives

Table 2: factor loadings for AIS, PU, BI AND MS

AIS variables Extraction Sum of Squared Loadings: Total = 9.668, % of variance =55.081		PU variables Extraction Sum of Squared Loadings: Total = 6.149, % of variance = 61.230	
Variable	Factor loadings	Variable	Factor loadings
AIS3	0.753	PU2	0.815
AIS1	0.646	PU1	0.775
AIS7	0.607	PU	0781

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AIS2	0.595	PU	0.742
AIS5	0.562	PU	0.633
AIS6	0.559	PU	
AIS4	0.474		
BI variables			
Extraction Sum of Squared Loadings: Total = 5.529, % of variance = 66.756			
Variable			Factor loadings
BI1			0.761
B2			0.733
B3			0.721
B4			0.563
MS variables			
Extraction Sum of Squared Loadings: Total = 5.150, % of variance = 71.908			
Variable			Factor loadings
MS1			0.798
MS3			0.747
MS2			0.643
MS4			0.581

Source; Field work (2022)

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Only one component was extracted per each construct from its related variables.

The solution was not rotated (No rotated component matrix)

Correlation Analysis

Correlation analysis was done to assess the strength of association among the variables.

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The results indicated the correlation ranges from $r = 0.651$ to $r = 0.698$ at $p < 0.01$, that indicated there is association between the independent variables and the dependent variable under the study (Kothari & Garg, 2012) as indicated in table 3

Table 3: Correlation Analysis among variables (N=93)

Variable	AIS	PU	BI	MS
AIS	1	.0.698	0.675**	0.651**
PU	.0.698	1	0.651	0.656**
BI	0.675	0.698	1	0.651
MS	0.651	0.698	0.675	1
N	93	93	93	93

**Correlation is significant at the 0.01 level (2-tailed); Source; Fieldwork, (2022)

Table 4 : Multiple Linear Regression Analysis and Model Summary

Assumptions of linear regression				Model summary statistics	
Variable	Tolerance	VIF		R	0.645
PU	.481	2.078		R squared	0.416
BI	.429	2.332		Adjusted R squared	0.396
MS	.453	2.206		SE	2.88964
				ANOVA summary	
				F (p-value)	21.997(<0.001)

Multiple Linera Regression Coefficients^a

Third Business and Economic Development Conference (BEDC, 2022), Held on 15th - 16th November, 2022 in Dodoma, Tanzania

Model		Unstandardized Coefficients		Standard ized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	10.502	1.856		5.660	.000					
	PU	.392	.154	.296	2.535	.003	.579	.259	.205	.481	2.078
	BI	.459	.171	.332	2.687	.009	.595	.274	.218	.429	2.332
	TOP	.133	.177	.090	.750	.455	.515	.079	.061	.453	2.206
a. Dependent Variable: AIS											

Source; Field Work (2022)

Effect of Perceived Usefulness (PU) on Adoption of Information Security Policies by employees in Public Organization

The findings in table 4 indicated that, a unit increase in Perceived Usefulness has 0.296 at $p=0.003$. Since the P value is less than 0.05. Therefore, Perceived usefulness (PU) has Positive and significant effects adoption of Information Security Policies by employees in Public Organization in Tanzania. The alternative hypothesis is accepted and the null hypothesis is rejected.

Effect of Behavior Intention (BI) on Adoption of Information Security Policies by employees in Public Organization

The findings in table 4 indicated that, a unit increase in Behavior Intention has 0.332 at $p=0.009$. Since the P value is greater than 0.05. Therefore, Behavior Intention (BI) has no significant effects adoption of Information Security Policies by employees in Public Organization in Tanzania. The alternative hypothesis is rejected and the null hypothesis is supported

Effect of Top management Support (MS) on adoption of Information Security Policies by employees in Public Organization (AIS)

The findings in table 4 indicated that, a unit increase in Top management support (MS) has 0.90 at $p=0.455$. Since the P value is greater than 0.05. Therefore, Top management Support (MS) has no significant effects adoption of Information Security Policies by employees in Public Organization. The alternative hypothesis is rejected and the null hypothesis is supported

Discussion

The findings have shown that perceived usefulness has positive and significant influence on adoption of Information Security Policies by employees in Public Organization. These findings have shown that, the use of information system security policies can assist in accomplishing task quickly, increase productivity, assist in planning of the activities in hence enhance the work performances (Chille et al., 2021).

The findings conform to the Technology Acceptance Model (TAM) as indicated by Davis *et al.*, (1989) which explains the influence of perceived usefulness on the use of technology to individuals. The study has indicated the needs of employees in the public organization on understanding the usefulness of the policies, that reinforce the usefulness of the technology that are given to them by the management

This study has similar findings as the study done by Effendy *et al.*, (2021) on the effects of perceived usefulness, ease of use and subjective norms on the intention to use electronic wallet in Indonesia. However the study has similar findings with the study undertaken by Chille *et al.*, (2021) in Tanzania; Hussain *et al.*, (2021) in Pakistan and Scchud *et al.*, (2019) in Indonesia. The findings have different results with the study done by Tahar *et al.*, (2020) in Indonesia

The findings have indicated that Behaviour Intention (BI) has no influence on adoption of Information Security Policies by employees in Public Organization. The alternative hypothesis which stipulates that Behaviour intention significantly influences the adoption of the information security polices among the employees in public organization is rejected and the null hypothesis is supported.

These findings are not consistent with the the Technology Acceptance Model (TAM) which was introduced by Davis (1989) in predicting an individual intention of using technology. Therefore,

these findings gives the impression that behavior intention is not the predicting factor on the adoption of the information security polices among the employees in public organization in Tanzania. This implies that empirically that behavior intention can not be validated in all situation regarding human adoption behavior towards technology (Chille *et al.*,2021)

According to Davis *et al.*, (1989) eexternal factors such as design characteristics have the influence on behaviour intention. So, there are many design characteristics that surrounds an individual of which the organization needs to undertake thoroughly need assessment of the public employees on understanding the needs and wants of the respective employees regarding the information security policies that they can adopt in relation with behavior intention, as this creates the impression that behavior intention can be dynamic in relation with the environmental factors that can affects the respective society.

These findings have inconsistent results with the past studies which showed that behaviour intention have an influence on the use of the technology in Malaysia, which was done by Shanmugam *et al.*, (2014). Also, the study done by Chao (2019) in China, which indicated that behaviour intention has a positive and significance effects on the use of technology. There is a need of understanding further on the attitude of public employees in Tanzania regarding the adoption of technology as attitude formation has an effect on the behavior intention of the individuals regarding the adoption of technology(Bagozzi, 2007).

However, the findings have indicated that top management Support (MS) has no significant effects on adoption of Information Security Policies by employees in Public Organization. The null hypothesis which stipulates that top management Support (MS) does not significantly influences on adoption of Information Security Policies by employees in Public Organization is supported and the alternative hypothesis that top management Support is rejected. This entails that top management is not the predicting factor in on adoption of Information Security Policies by employees in Public Organization in Tanzania. These findings are in contrary with the past studies which showed that Top management have an influence on the use of the technology (Baker, 2012)

However, the findings are in contrary with the Technology Organization Environmental framework (TOE) which was integrated by TAM in guiding this study. According to TOE organization that have better top management can influence better changes that enhance adoption

process in the organization (Baker, 2012), According to Baker (2012) adoption is possible when there is best environment on which employees work and the availability of the best available technology. With these findings it implies that the employees in the public institutions of Tanzania perceived that the top management is not the predicting factors of adoption of the information security policies adoption, that there are others factors than top management support in Tanzania that affects the adoption of information security system policies.

Conclusion and Recommendations

This study used the two major constructs of TAM which were perceived usefulness (PU) and Behaviour intention (BI) and integrated with a top management support (MS) construct from Technology organization and environmental framework (TOE). The findings of this study are in support of Technology acceptance model (TAM) on the effects of perceived usefulness on actual acceptance of technology particularly in information security system under this study. However, the findings have indicated that Behavior intention (BI) and Top management Support (MS) has no significant effects on acceptance of technology specifically information security system in Tanzania. Therefore, the study findings have validated the need perceived usefulness on TAM on the use of technology and did not validate the behavior intention and top management support from TOE respectively. Therefore, there is a need of public organization in enhancing the usefulness of their policies regarding the information system security, however, there is a need of finding out other factors rather than top management support and behavior intention in order to enhance more employees on the adoption of information system security policies in public organizations in Tanzania

Study Implications

The findings of this study have made the theoretical contribution regarding the constructs of TAM which are perceived usefulness, which have been indicated to be the parsimonious predictor of the adoption of information system security policies in public organization in Tanzania. The model under this study can therefore be used in other studies on investigating the factors influencing the adoption of information system security policies in developing countries, particularly in the African context.

However, the findings have contributed to the factors that have no influence adoption of information system security policies in Tanzania by identifying that behavior intention and top management support to have no influence on the adoption of information security policies in public organization in Tanzania. This imply the need of further studies on the influence of BI and MS on the adoption of information security policies in public organization in Tanzania

Limitations and Areas For Futher Studies

There are many factors regarding technology adoption that have not been covered in this study. That being the case, further studies regarding information security policies in public organization in Tanzania or in African context should be further done

The study was done in one region only. Since Tanzania has 31 regions, it is likely that the sample may not be the actual representation of the entire population, regarding factors influencing the information security policies in public organization in Tanzania. Nevertheless, this study was limited to Perceived usefulness, Behaviour intention and Top management Support only. Further study may include other factors such as perceived ease of use, perceived behaviour control, and system characteristics, attitude on identifying the factors influencing the adoption of information security policies in public organization in Tanzania

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Challenges facing Women involved in Informal Financial Groups at Majengo and Sabasaba Markets in Dodoma City, Tanzania

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Abstract

Since the bulk of the women in Dodoma who participate in community saving organizations are impoverished, they are not expected to have an impact on decisions made at all levels of government, from the domestic to the international. This study evaluated the difficulties faced by women in Majengo and Sabasaba markets in Dodoma city's informal financial groupings. By employing a questionnaire and an interview, 88 beneficiaries' women from the Majengo and Sabasaba marketplaces provided information for a cross-sectional research design. Findings showed that the biggest obstacles for women seeking loans from informal financial groups include collateral, loan delays, high interest rates, and loan requirements. The study came to the conclusion that women's levels of economic well-being differ from one another when they have access to larger loans. In order to increase and improve their economic wellbeing, the study advises women to take charge of their own self-efficacy through economic mobilization and group building. This will make it simple for them to get loans.

Key words: informal financial groups, women and challenges

Introduction

Background Information

In informal financial groups, members contribute money to a shared fund and lend it out whenever it is convenient for them. These organizations were formed to increase financial inclusion in societies with limited or no access to official financial institutions (Yogesh, 2020). Informal financial groups (IFGs) have become a vital tool for advancing women's financial inclusion in Africa during the past 20 years. In the 1990s, community-based savings groups experienced rapid expansion (Nannozi, 2019). There are reportedly more than 14 million members in more than 700,000 active savings groups worldwide, with 80% of them being women. Governments, national and international NGOs, and banks all over the continent now support them.

By strengthening their savings and lending activities, numerous informal savings clubs have successfully improved the position of women in both rural and urban areas (Mabwe & Dundu, 2018). With their newfound knowledge, these women may now further their education, pick up new skills, expand their enterprises, and empower themselves to provide for their family. Women's involvement in these groups also resulted in improvements in their social participation, home and property ownership, stable income sources, and usage of cash for household duties (Oranu *et al.* 2020).

In Tanzania, informal saving groups are financial organizations that can be registered as autonomous legal entities because they are not under the jurisdiction or supervision of the government and often offer financial services to the local population (Ahlen, 2012). Through their representation of excluded consumer groups in nations and regions with low formal financial sector participation, informal saving groups support financial inclusion. These saving organizations provide services and are widespread among women's saving organizations. Rotating Savings and Credit Associations (ROSCAs) or Accumulated Savings and Credit Associations (ASCAs) are the most popular saving models utilized by informal saving organizations (Kesanta and Andre, 2015).

ROSCAs work by collecting deposits from each group member (daily, weekly, or monthly), which are then combined and given to one member of the group at the conclusion of a predetermined time (usually at the end of every month). A preset rotation determines who gets the money, guaranteeing that everyone will eventually get a sizable dividend (Oranu et al., 2020). As opposed to ROSCA groups, ASCA groups require regular contributions from group members. However, instead of rotating payouts, the ASCA group fund is held for a set amount of time (typically one year) or is kept continuously (like in a credit union), and members are free to make withdrawals and deposits, subject to the decision of the member to leave the group (Oranuet *et al.* 2020).

These typical informal saving club models aid women in boosting their income, diversifying their activities to lessen susceptibility, managing risk, paying school fees, balancing consumption, and having security in case of emergencies. Despite the models' well-known successes, research reveals they are not the only way to economically enlighten women (Nawaz, 2018; Khandker, 2015). Similar findings were observed by URT (2011) and Mtamakaya et al. (2018) about the influence of opportunity on decision-making. In addition, the majority of women—60% of them—live in poverty in Tanzania, which has an impact on their livelihood (URT, 2011). This encouraged the researcher to examine the challenges facing informal financial groups on the financial security of women at the Majengo and Sabasaba markets in Dodoma.

Because women are one of the most disenfranchised groups in society, the majority of governments work to advance their status because doing so benefits the entire community (Wahid et al., 2017). Most women in this situation take the initiative to better their economic situation by joining VICOBA and other informal financial groups to gain access to capital to finance their income-generating activities, but the majority of women are still poor (Dyanka, 2020). In addition, it is predicted that women make up 70% of the world's poor (Khan & Noreen, 2012).

In Tanzania, a number of policy changes have been implemented with the goal of reducing the gender pay gap and empowering women financially. For instance, Tanzania's development vision 2025 has as its first state the promotion of good quality livelihood through the achievement of gender equality and the economic empowerment of women by the year 2025.

Additionally, Chapter 2 of the National Five Year Development Plan (FYDP) 2016/2017–2020/21, Section 2.13, aims to ensure women's economic empowerment (Mulimila, 2019).

The relationship between women's empowerment and many areas of socioeconomic growth has been the subject of numerous researches. The studies evaluate the impact of community saving organizations on the welfare of women in Uganda (Nalubowa, 2019). The 2019 study by Mulimila examined the contribution of internal lending networks and savings groups on women's economic empowerment in the Morogoro municipality. However, nothing has been said about the consequences for women who participate in informal financial groups. Examining the difficulties that women face in informal financial groupings is crucial.

Statement of the Problem

Most of governments in the world seek to empower women because they are one of marginalized groups in many communities, because empowering women is like empowering the community at large (Wahid *et al.*, 2017). In this case, most women take self-initiatives to empower themselves economically by joining various informal financial groups such as VICOBA in order to access funds to finance their income generating activities, although most of women are still poor (Dyanka, 2020). Furthermore, it is estimated that seventy percent of the world poor are women (Khan & Noreen, 2012).

Despite these efforts, the study of Ollutu (2017) in Dodoma City found that, about 70% of women participating in community saving groups have poor economic wellbeing compared to men, and have a little opportunity to impact decision making from household level to the national level because most of them are poor.

However, little has been addressed on the challenges facing women involved in informal financial groups. Therefore, this study examined the challenges facing women involved in informal financial groups at Majengo and Sabasaba markets in Dodoma city.

Literature Review

Theoretical Review

This study was guided by economic empowerment theory. According to Huntington (2000) as cited in Makombe (2010), empowerment is a process of self-determination and self-actualization leading to the capacity of to act on one's behalf. It's about people – both men and women- taking control over their lives: setting their own agenda, gaining skills, increasing self-confidence, solving problems and developing self-reliance, also the international community and Tanzania's position of respecting human rights. Economic empowerment denotes efforts of the government and other stakeholders aiming to empower people in terms of economic aspects (TNBC, 2008).

Despite of these efforts by the government and other stakeholders in empowering women financially formally or informally, most of these women participating in these informal financial groups still experiencing some challenges. Therefore, this study intended to identify these challenges and suggested some recommendations which should be taken in order to empower women economically.

Empirical review

Datta (2009) conducted a study about small business finance-implication of delay in loan suctions by formal sector. The study looks at the operation of formal and informal credit market in terms of a model. The findings revealed that, the possibility of delay in the settlement of the loan negotiation can induce some of the borrowers to leave the formal credit market and go to the informal sector. The study concluded that, given the different nature of the formal and informal market, the policy on formal sector should focus on supplementing rather than supplanting the informal market.

Gichuki *et al.* (2014) conducted a study about challenges facing micro and small enterprises in accessing credit facilities in Kangemi Harambee market in Nairobi city. Stratified sampling was used to gather 241 MSEs located in Kangemi Harambee market. The study revealed that the key challenges hindering micro and small enterprises from accessing credit facilities to be high cost of repayment, strict collateral requirements, unwillingness of people to act as guarantors, high credit facilities' processing fees and short repayment period.

Shawiza (2018) found that despite the advice of financial analyst about the inherent risk of informal financial Institutions including loss of money still a lot of people continued to use IFIs. The same analysis was made by Mahdi (2018) that interest in IFIs exceeds material benefits.

Informal financial groups help members to maintain and improve their resources by promoting savings and making available instant cash amount which can be used for business startup and meeting household necessities such as food, school fees and the like. Though, many scholars agree that the social roles and assistance contributed by these informal financial groups among members though not clearly stated, when emergencies occur, members receive support beyond financial support but extends to material and moral support. In these groups members may learn from each other's, share their experience and advice (Shawiza, 2018).

FinAccess (2018) studied on the role of informal financial groups on extending financial inclusion in Kenya. They made literature on informal groups mostly ROSCAs and ASCAs to identify the vital ways in which their operations can be analyzed, much effort where to study why these groups have become so popular. Their findings concluded that the main reason for many people joining these groups is due to ability to mobilize, to make savings commitment and self-discipline.

Conceptual Framework

Most empirical studies and scholars, for example Sambe *et al.* (2013), Beck (2013), Aliber (2015) and Kondratjeva (2017) were interested in studying how informal financial institution (IFI) have improved financial wellbeing of their members. Such literature focused on the growth of informal financial institutions and the financial benefits they offer to the members, however, but they took very little interest on the influence of those informal financial groups (IFGs) on the economic wellbeing of women. Therefore, this study intends to address the gap by assessing the challenges facing informal financial groups on the economic wellbeing of women at Majengo and Sabasaba markets in Dodoma city.

Research Methodology

The study, which targeted women in Majengo and Sabasaba market informal financial groups, was carried out in Dodoma City. The region was chosen because, compared to men, 70% of community saving group members who are women have poor economic standing (ollutu, 2017). This strategy was used because it may rely on the distinct advantages of each technique and offer a more thorough knowledge than would be feasible with just one approach. Additionally, a cross-

sectional research strategy was used in the study. This design was chosen because the research aims to gather data utilizing a variety of data collection techniques at a single point in time. Additionally, this design offers a thorough snapshot of the state of things at a particular time.

All of the women in informal financial groups at Majengo and Sabasaba Markets in Dodoma City were the study's target population. 88 respondents and 5 key informants were chosen for the study using simple random sample and selective sampling, respectively. The proportionate sampling technique was used to determine the sample size in the women's informal financial group in each market, as indicated in Table 1.

Table 4: Proportional sample size determination

Markets	Number of women	Computation	Sample size
Sabasaba	122	$122/764 \times 88$	14
Majengo	642	$642/764 \times 88$	74
Total	764		88

Source: Fieldwork research (2022)

To get quantitative information from women in unstructured financial groups, a semi-structured questionnaire with open- and closed-ended questions was utilized. This approach was chosen because it typically costs less money and takes less time to administer, allowing the researcher to contact every respondent at once. The questionnaire was created to collect data for each distinct purpose and included both closed-ended and open-ended questions. The questionnaires were self-administered, with participation from the researcher and two study assistants.

Using the interview technique, data is collected by giving oral verbal stimuli and asking for oral verbal responses (Kothari, 2010). Key informants' qualitative information was gathered through structured interviews, along with extra data from women who participated in unofficial financial groups. This approach was used because it enables the growth of fruitful social exchanges and

fruitful social bonds between the researcher and the respondents. The interviewing manual served as a tool for gathering data.

Data were analyzed using descriptive statistics to determine the difficulties women face in informal financial organizations. Frequency, percentage, and multiple replies were utilized to quantify these difficulties. Thematic analysis, which entails familiarizing the results, assigning codes, establishing themes, and connecting themes and objectives based on relevance, was used for qualitative analysis (Braun, 2019).

Findings and Discussion.

The results demonstrate that women's informal finance organizations at the Mjengo and Sabasaba marketplaces have a significant impact on women's welfare. However, there are a number of issues that women's groups must deal with, such as tightening lending requirements, high interest rates, and a lack of collateral security. Because these organizations function informally and with unskilled staff, customers are less likely to be satisfied as a result of subpar customer service and other cumulative problems.

Delay of loan

According to the results shown in Table 2, 28.4% of respondents named loan delays as the worst issue facing women in informal financial groups. Women rely heavily on loans from informal financial groups; therefore, the delay of such loans results in the postponement of economic activities undertaken by women. The delay of loans is the biggest challenge ranked from the results of this study. In this case, the delay of loans slows the movement of women in conducting economic activities in such a way that they have been fluctuated in terms of income generating so that they may not achieve economic wellbeing for their families, in accordance with Huntington's economic empowering theory of 2000. These findings are consistent with those of Datta (2009), who found that the prospect of a delay in the loan negotiation's resolution can lead to some borrowers leaving the legitimate credit market and entering the black market. These findings, which are based on qualitative research, show:

“.... Our institution depends on the repayment of loan from other women so that others can apply for the new loan. Therefore, it's a circulation from one customer

to another and there are interdependent. So it happen by putting other things constant like penalties from an interest rate, other women fail to repay the loan which lead to delay to offer loans to other customers....” **interview with credit officer of informal financial institution X.**

Table 5: Challenges facing women on informal financial groups

Challenges	N	Percent	Percent of cases
Delay of loan	64	28.4%	72.7%
High interest rate	62	27.6%	70.5%
Loan conditions	38	16.9%	43.2%
Poor customer care	35	15.6%	39.8%
Collateral	26	11.6%	29.5%
Total	225	100.0%	255.7%

Source: Research analysis (2022)

High interest rate

According to the findings in Table 2, which were highlighted by 27.6% of respondents, excessive interest rates are one of the biggest obstacles facing women in informal financial groups. This result suggests that when applying for loans, lenders and borrowers are constrained by high interest rates. Women therefore experience difficulty applying for loans and paying them back. Because of this, high interest rates prevent women from taking care of their lives as is suggested by Huntington's economic empowerment theory by making it difficult for them to borrow money and make loan payments (2000). These findings concur with those of Gichuki et al. (2014), who found that the high cost of repayment is the main obstacle preventing micro and small businesses from receiving credit facilities. According to an interview with a credit officer from one of the institutions engaged in this study:

“... We are offering 30% of the cost of the total principle as the repayment price. Therefore if we allocated 100,000 shillings to a customer that means he/she has to repay 130,000 shillings to the period of one month ...” **interview on 3rd July 2022.**

The interest rate offered by this financial institution is therefore too high when compared to the interest rate offered by legitimate financial institutions, according to the study. According to the study, these loans from informal institutions have high interest rates since they have easy access and obtainable collateral.

Loan conditions

According to the results shown in Table 2, which were highlighted by 16.9% of respondents, loan conditions are one of the biggest problems that women in informal financial organizations face. These findings suggest that a number of loan terms, particularly for women, are unfavorable and unhealthy, which makes it difficult for women to obtain loans from informal financial organizations. Therefore, as suggested by the economic empowerment hypothesis, a lack of access to loans from informal financial institutions does not help the economic empowerment of women (Huntington, 2000; Makombe, 2010). According to the economic empowerment idea, women can be made less dependent by giving them access to favorable credit options, for example, and as a result, they will defend their own families. These findings are consistent with those of Gichuki et al. (2014), who found that the high processing costs and brief repayment terms of credit facilities are the main obstacles preventing micro and small businesses from using credit facilities. These findings, which are based on qualitative research, show:

“.... Before providing the loan there are some procedures and conditions that must be followed in order to secure the loan to women. You know it's not easy to give the loan to a person who don't real know him/her without relying to some conditions that will guide you to be very secured ...” **interview made on 5th July 2022**

As a result, various policies, rules, and laws need to be changed in order for an unofficial financial institution to be recognized and able to offer services in accordance with the norms and regulations of financial institutions.

Poor customer care

Poor customer service was highlighted by 15.6% of respondents as one of the primary challenges faced by women in informal financial organizations, according to the results shown in Table 2. These findings are consistent with those from January (2015), which showed that NMB's customer care services and activities were typically delivered at a slow speed and did not greatly please clients. For this reason, it was noticed that women's opinions, complaints, and requests for time throughout the loan application procedure were all disregarded. Client unhappiness, according to January (2015), was a result of bank workers' subpar work performance, dismissing customer concerns, and taking a lengthy time to serve consumers. As a result, terrible customer service affects how customers perceive how well a particular organization is performing, which reduces women's access to credit from informal financial institutions.

Collateral

According to the results shown in Table 2, which were cited by 11.6% of respondents, a key obstacle for women in informal financial organizations is a lack of collateral. These findings show that women struggle with the issue of collateral shortage, which makes it difficult for them to obtain loans from unregulated financial organizations. Gichuki et al(2014) .'s findings that stringent collateral requirements are a major barrier to micro and small businesses getting loan facilities complement these findings. Because of the severe collateral requirements, these women cannot obtain financial services from informal financial institutions, which results in poor living conditions and cannot be addressed by Huntington's economic empowerment theory (2000). These results were corroborated by qualitative data showing:

“.... If there is no collateral then no loan, we are avoiding misunderstanding with our customers because if there is no collateral people will almost avoiding repaying the loan ...” **interview made on 5th July 2022.**

The study therefore came to the conclusion that in order for informal financial institutions to continue sustainably, they must have strong collateral requirements. The criteria are unwelcoming since most women were unable to acquire financial services from informal financial institutions, undermining their ability to become economically empowered as suggested by Huntington's economic empowering theory in 2000.

Conclusions and Recommendations

Conclusion

The study came to the conclusion that there are differences between women's levels of economic well-being because some women are more likely than others to access greater loans from informal financial institutions. Lowering the interest rate is necessary to empower these women and enhance their quality of life. People like to work with these organizations because they have lenient credit requirements, quick loan processing, and interest rates that are cheaper than those of traditional financial institutions. Because of the improvements in these women's economic wellbeing brought about by informal financial organizations, savings have increased. In order to survive sustainably, the informal financial organization imposes rigorous collateral requirements. The criteria are unwelcoming since most women were unable to acquire financial services from informal financial institutions, undermining their ability to become economically empowered as suggested by Huntington's economic empowering theory in 2000.

Recommendations

The recommendations provided by this study are listed below and are based on the findings and discussions. The proposals are laid out in three categories: theoretical advice, policy recommendations, and the respondents themselves (women).

- In order to improve their own eligibility for loans from informal financial groups, women are expected to generate their own income and other favourable conditions as collateral.

This can be accomplished through economic mobilization and group building, which will make it easier for them to get loans, so boosting and improving their economic well-being.

- The study makes the suggestion that in order to keep clients for the long term as well as the short term, financial institutions should treat them well. To boost loan accessibility, FIs should also provide their clients competitive interest rates and practical lending terms.
- In order to address the impact of informal financial groups on the financial security of women, theoretical approaches are required. The government needs to do a better job of enforcing the rules and laws governing informal financial groups. To do this, it is advised that cooperative unions closely collaborate with the judiciary, police, and other intelligence agencies to confront illegal practices.
- There should be a strong government strategy that could account for how women are involved in achieving economic security. This will facilitate the informal financial institution's influence on women's access to savings and credit as outcomes of economic well-being in a supportive manner.

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Assessment Of Group Lending Performance in Financial Institutions in Tanzania. A Case of Commercial Banks

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Abstract

This study aimed at obtaining data on the forms of social collateral, borrower benefits, challenges, performance, and prospects of the group lending approach in microfinance services delivery. Stratified sampling will be used to select 350 household heads who are commercial bank customers in five selected commercial banks in Dar es Salaam and 20 bankers. Data will be collected through interviews, questionnaires, and focus group discussions. Data will be analyzed by using both content and descriptive analysis and then triangulation will be employed to cover a data vacuum.

Keywords: Group lending, Commercial Bank, Opportunities, Challenges.

Introduction

Group lending promotes the growth of low-middle-income customers nationwide as it promotes society to participate in economic activities(Mowl & Mowl, 2017). Group lending has shown significant improvement since the 1970s as introduced by Muhammad Yunus the founder of Grameen bank. Moreover, Grameen bank was established to save mainly poor women as they were ignored by moneylenders because they were regarded to be housewives and not business persons(Scott, 2006).

To embrace women to participate in increasing the income of the poor family, women were encouraged to form groups of five members and be provided with non-collateral loans. Group members can meet after two weeks or a month to save and repay their dues(Islam et al., 2015). Consequently, all transactions are recorded on a financial diary called a passbook and transferred

to a loan officer's ledger. During the meeting, all matters concerning the performance of the group could be discussed individually and if there is a bad situation, will be addressed before it happens(Bähre, 2020).

The performance of GL depends on the bond of group membership and joint liability. Moreover, group members may use chattels as security to secure the loan. The loan for individual group members varies from USD 86 to USD 430 initially and graduating till they reach the maximum of USD 1288 depending on the credit rating of each member. Consequently, GL has created self-employment for the forgotten group of informal sectors(Kittilaksanawong & Zhao, 2018).

Statement of the Problem

Commercial banks adopted group lending services as on source of generating more income(Sithole et al., 2021; Wu, 2018). Consequently, the procedure used by commercial banks in providing group loans is the same as those of microfinance(Credit Risk Management Policy, 2008). The main target is to finance small businesses such as street vendors, mobile money providers, carpentry, food vendors, and agribusiness. To be a member you need to open a saving account with your respective bank as a mandatory requirement. Successful groups will graduate from informal business to formal as they undergo training to improve and sustain their business(Wu, 2018). Moreover, commercial banks can effectively attain the objective of customer retention strategies as they grow with their customers from group lending to individual or business lending. However, despite the growth in the number of group lending in commercial banks its contribution in terms of profitability is not growing. Also, there could be a problem that needs to be addressed to remove that bottleneck to improve the performance of the lending group.

Objective of the Study

This study aims at assessing the performance of lending groups in financial institutions. The study objectives are:

- i. To examine the challenges posed by group lending in Tanzania
- ii. To determine the performance indicators of the lending group in Tanzania
- iii. To determine the improving procedures for enhancing the performance of group lending in Tanzania.

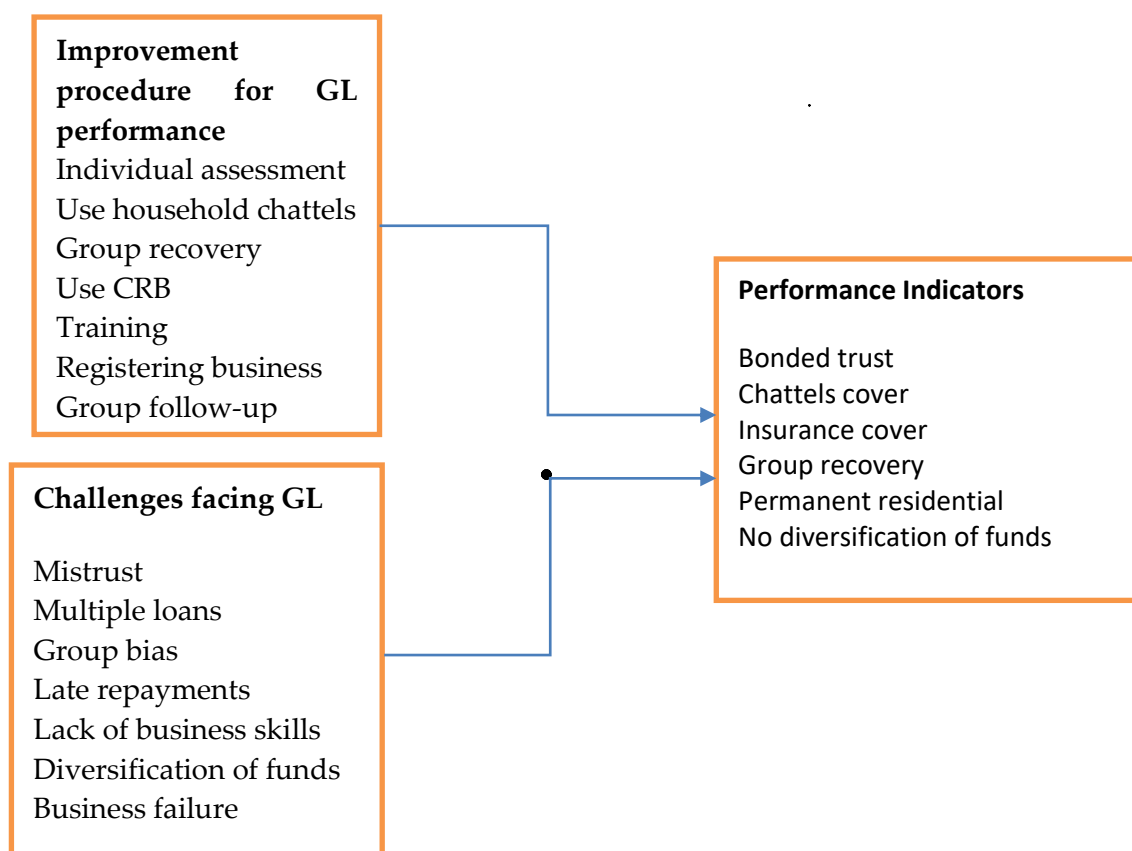
Literature

Conceptual Framework

The study aimed at the Assessment of Group lending performance in financial institutions in Tanzania and suggest appropriate procedures for enlightening the performance of group lending. Group lending has brought substantial financial inclusions of the forgotten group to participate in socio-economic business as the model of transforming microfinance(Sabin & Reed-Tsochas, 2020; Shah et al., 2019). This also improved solidarity in society as they depend on trust to perform well. Moreover, beneficiaries of group lending are located in both urban and rural areas, especially in market centers. Group members originate from a range of activities not limited to street vendors, money vendors, farming, tailors, carpenters, boda-boda, car ash vegetable sellers, tailors, and food vendors. The existing literature and microfinance models show that group lending work under joint liability but performance is still lagging(Mou et al., 2020; Reshu Goel | Dr. Megha Aggarwal, 2020). Therefore, to improve the performance of group lending the suggested factors should be achieved as shown in the conceptual framework below.

Dependent Variables

Independent Variables



Source: Researchers (2022)

The framework concept discussed above addresses three factors related to the research questions addressed in this study, namely challenges, performance indicators, and procedures to foster group lending performance.

In most sub-Saharan countries group lending is perceived to provide a good bridge from the informal to the formal sector. However, the challenges impending these groups are changing currently. Consequently, multiple loans, group biasness, late repayments, lack of skills, business failures, and fund diversification are counterfeiting the group lending performance(Shah et al., 2019).

The provision of training in microfinance tailored to group lending has shown significant improvement in society's life and finance. Also, group lending has been used as the platform for other services such as health facilities(Rosenberg et al., 2019). Moreover, the procedure to foster the growth of group lending is still lagging. Group assessment, home appliance

securities, financial training, local business registrations, and use of credit reference bureaus will help in improving the performance of these borrowing groups

Despite instant improvement in microfinance institutions, the future of group lending in sub-Saharan Africa is uncertain due to a lack of information about their performance, including loan repayment by borrowers (Mzingula, 2020). Moreover, bonded trust, chattels cover, insurance cover, group recovery, permanent residential, and no diversification of funds provide a good indication of performing group lending services.

Empirical Review

Group lending emerges from Grameen bank in Bangladesh where it is widely seen as the creation of Mohammad Yunus. Grameen bank intended to mobilize financially excluded individuals to create groups to finance them(Protter & Quintos, 2021);(Scott, 2006). Group lending is known as the best alternative and harmonizing instrument for credit exclusion individuals by using a joint liability as the collateral for credit disbursement. This replicates economic models to the social model, where a group consisting of five individuals uses joint liability to access funds inexpensively and actively ;(Reshu Goel | Dr. Megha Aggarwal, 2020). Therefore, the need for a group lending model provided millions of poor in the societies to improve their living or business standards.

Loans provide or solve the financial capital gap in businesses. It is revealed that finance customs view capital as being accumulated by intermediators, and financial institutions by various servers and demanding borrowers(Hockett, 2019). Individuals or groups can access funds from financial institutions after successful assessment and the lenders have proved themselves beyond reasonable doubt about the intention of the loan(Haldar & Stiglitz, 2016). The purposes of doing the assessment are to ensure that the assessment's sound, terms, and conditions are justified, and a formal approval procedure has been followed in the internal structure.

The key question is how credit societies can switch from an economic model to a social model of joint liability creation. Group loan creditors assess the joint liability by looking at the trust of every individual in the group(Bähre, 2020; Kiiru, 2018; Kittilaksanawong & Zhao, 2018). Consequently, the Formation of groups mainly depends on the social logical

network among group members such as demographical factors including age, experience, and customs. Moreover, some microfinance institutions require group members to deposit 5% to 20% of the requested loan amount and pledge home chattels like electrical utilities as collateral(Reshu Goel & Dr. Megha Aggarwal, 2020). Therefore, social capital using joint liability reduces information asymmetries and improves recovery performance.

Group lending has its remedial benefits in microfinance. Moreover, the group lending strategy reduces moral hazards, adverse selection, and debt collection issues. (Gomera & Oreku, 2020; Magali, 2021). Consequently, joint liability incentivizes group members to use their social ties embedding their social capital to screen, monitor, and enforce loan repayment on their peers(Haldar & Stiglitz, 2016). Members of a borrowing group act as guarantors for each other's loans in group lending programs (Kittilaksanawong & Zhao, 2018). The burden of defaults of one member is evenly distributed to each member during the recovery of bad loans.

The art of group lending tends to differ from country to country, financial institutions, microfinance, and individual levels. Some receive the lump sum and distribute it evenly to members while others formulate the group though disbursement of the loan is done at the individual level based on the capacity for loan repayment(Credit Risk Management Policy, 2008). But both when they receive money every member monitors each other and ensures the peers use the intended purpose of borrowings to avoid defaults.

One of the most risks faced by solidarity loan members is default risk. Consequently, the problem arises after diversification of funds to perform different activities like purchasing home appliances, starting a new unfamiliar business, and business failure(Dzingirai, 2014; Mäkinen & Solanko, 2018). Consequently, default risks may be intentionally caused or resulted from other risks, without the group members' awareness. In group lending, more intensive care should be done during the assessment to minimize or eliminate such type of risk as joint liability affects the entire group members(Baland et al., 2013; Emekter et al., 2015).

Group financing evolved from microfinance as one of the best tools for eradicating poverty. Previous studies revealed that group lending has a substantial constructive impact on poverty because it is important in distributing funds to the poor and preventing moral threats and

adverse selection(Shah et al., 2019). Consequently, group lending has complemented society by creating saving and business behavior (Santos, 2019). Similarly, group lending services are encouraged to transform the public into confidence that it is possible to formalize business while achieving sustainable business growth.

Method

Study Area

The study will be carried out in Dar es Salaam because it is the biggest commercial city in Tanzania.

Sampling Procedures

Stratified sampling was used to select a total of 189 respondents, where 169 will be household heads who are commercial bank customers in Dar es Salaam and 20 bankers.

Research Design

A mixed-method design was used because the nature of the study suggests the collection and integration of both quantitative and qualitative data (Creswell, 2014).

Data Collection

Data was collected through a focus group discussion, interview, and questionnaires to obtain both quantitative and qualitative data. Triangulation of the two data sets will be used to validate the study's findings.

Data Analysis

Qualitative data was analyzed by content analysis, while quantitative will be analyzed by Statistical Package for Social Science (SPSS) software for generating figures. As the research design is a mixed-method then the researcher will integrate data from qualitative to quantitative for effective interpretation of the data collected.

Results and discussion

Demographic information

This study aimed at assessing the performance of credit groups in financial institutions. Different loan groups were involved with different business and work categories. Group members were mainly self-employed majoring informal sectors such as charcoal, mama

ntilie, retail shops (mangi shops), vegetable shops, and street vendors just to mention a few. The questionnaire was distributed to 169 participants and returned it. Similarly, the interview involved 20 participants which included loan officers, supervisors, and group leaders. Table 2 below shows demographical characteristics based on gender and age as it influences the performance of loans.

Particulars		Frequenc y	Percent	Valid Percent	Cumulative Percent
gender	male	48	28.4	28.4	28.4
	female	121	71.6	71.6	100.0
	Total	169	100.0	100.0	
Age distributions	19_36 years	85	50.3	50.3	50.3
	37-54 years	84	49.7	49.7	100.0
	Total	169	100	100	

The profile showed that 28.4 percent of the group lending market was male and 71.6 percent were female. The majority of investors are of all ages from 18 years and above showing significant participation for every age group. Members with ages above 54 were not allowed to borrow as their production capacity is deemed to be at a low level.

Challenges facing group lending in Tanzania

The interview conducted by the researcher with group lending officers, loan administrators, and group members discovered that the group lending market in Tanzania is in the development phase and has insufficient knowledge of how the business can succeed through borrowing. Most sole business operators rely on their unprofessional assumptions to engage in debt markets. The statement in the five-point Likert scale (1 = Strong agree, 2= Agree, 3 = Neutral, 4, Disagree,) questionnaire was used to quantify participants' knowledge about group lending products and making a sound decision as shown in Table 3 below.

Challenges facing group lending

Related information	N	Minimum	Maximum	Mean	Std. Deviation
Number of repeated borrowings	169	2.00	4.00	3.1302	.72019
Number of loans per period	169	1.00	3.00	2.1183	.89852
Loan purpose	169	1.00	3.00	2.5385	.68139
Amount borrowed	169	1.00	5.00	3.7633	1.09254
Risk awareness	169	2.00	4.00	3.5325	.78706
Default rate	169	2.00	5.00	4.1420	.98377
Business experience	169	3.00	4.00	3.6272	.48498
Loan diversifications	169	2.00	4.00	2.8343	.91079
On-time payment	169	1.00	5.00	2.5917	1.10956
Business and loans knowledge	169	2.00	5.00	3.6331	.82106
Training attendance	169	1.00	5.00	2.3136	1.03619
Follow group behavior	169	3.00	5.00	3.5325	.54593
Group KYC	169	3.00	5.00	4.1953	.70100
Awareness of member's income	169	2.00	4.00	3.2249	.91109
Removal of group members	169	2.00	5.00	3.1065	1.14975
Group information sharing	169	3.00	5.00	3.8580	.41254
Group decision follow-up	169	3.00	4.00	3.8343	.37290
Defaulting members' removal	169	3.00	5.00	3.8521	.41763
Group guarantee	169	2.00	5.00	3.3018	1.13811
The same members are defaulting	169	2.00	5.00	3.2426	1.03812
Intra group bias	169	2.00	5.00	4.2485	.97456
Adhering to the group opinion	169	3.00	5.00	4.0473	.44736

According to the results disseminated in the table above, it was revealed that group members understand the risks of impairing their business when the business misbehaves (mean 3.5325). It was further shown that default rates are very high as group members defaulted more than four times per loan cycle by 72.2 percent (mean 4.1420). during the interview, one of the most stated reasons for defaulting was the unfavorable working environment, misallocation of borrowed funds, use of borrowed funds for business startups, and doing seasonal business (vegetable, fish, and fruit business).

“.... The business is difficult as for now we are facing drought, vegetables, cereals, and fruits are not available at the market at affordable price....” (Respondent, 2022)

Moreover, on-time payment of members is very low (mean 2.5917), loan diversification (mean 2.8343), and intragroup bias (mean 4.2485) were among the factor affecting group loan performance. This was also identified during the interview as some members were not paying on time as they want to wait for each other for them to pay together. There is a tendency of believing that, paying together collectively will protect the other member.

Lack of attending training on business-related issue for group members is one of the main challenges as members lack adequate knowledge and skills on how to develop their businesses and serve their loans. It was also revealed that they do not keep records of their business. This agrees with the study conducted by E, Ojwang' and I, Shau, (2021) that small businesses do not keep records of their business rather they conceal them for the fear of being taxed high.

The performance indicators of the lending group in Tanzania

Performance of group lending will depend on the mutual foundation of each group. Bonded trust is the art of the success of each group. During the open-ended interview, it was revealed that bonded trust creates a strong group which further helps the groups to mature and then shift from the informal sector to the formal sector. Moreover, the members with bonded trust protect the interest of each other and remove intragroup bias which is the main killer of groups

“.... We trust each other and in case one of our members faces a problem in his/her business and fails to repay on time, we pay on behalf to avoid penalty....” (Respondent,2022).

Provision of home and business chattels as the security cover managed to remove untrustworthy members who borrowed with the bad intentions of not paying the loan and leaving the burden to other group members. It was revealed that 75 percent of members with unsecured loans defaulted intentionally. Consequently, the group member who provided household chattels tended to feel shame when the members took their chattels.

Insurance cover is considered the best for the protection of the principal amount for both lender and the borrower in case a business disaster appears or the death of the group member.

It was revealed that each member is required to pay one percent of the disbursed loan amount as the premium for the loan insurance. Consequently, insurance provides the assurance to business and members that their business is protected from default risks.

In addition to this, defaulting members must exist in different circumstances including intentional default, mistrust, and defaulting with no reason. Group recovery is the best tool in combating these types of group members. The member should take immediate action to prevent such defaults.

Permanent residential is also the best strategy for ensuring group members do not default. Having own resident is the commitment to ensuring willingness to pay back the loan. Customer's intention is to avoid repayment, therefore if the group members have no permanent address, it is easy for them to run away.

No diversification of funds is managed by group leaders by ensuring the loan purpose is achieved for every group member. Every member must provide evidence showing the purpose of the loan before loan disbursement. Consequently, if the loan is used for the intended purpose, the chance of defaulting will be low.

“ To be honest. The reason why I am defaulting now is because I used the loan provided to purchase a residential plot for building a house.... ” (Respondent, (2022))

Procedures for enhancing the performance of group lending in Tanzania.

Individual assessment for every group member should be done together with loan assessment. Moreover, the individual character has a crucial effect on the performance of the loan as social behavior is direct related to loan performance. Individuals with bad social behavior do not pay the loan voluntarily. Consequently, members do not disclose all information for they fear of not being given the loan. Also, the tendency of overestimating sales and minimizing cost will overcapitalize the customer and the customer will default.

Use household chattels as the commitment for ensuring on-time payment without defaulting. moreover, defaulting members with chattels will be sold to cover the defaulted principal and interest amount. These chattels are listed on the chattel hypothecation form whereby the lender is permitted to sell the listed chattel as compensation for the defaulted amount. The letter of hypothecation should be signed before disbursement.

Group recovery and use of Credit Reference Bureau (CRB) should be used for loan monitoring and control tools. Continuous training of group members on effective loan

utilization and business development. Business follow-ups and business registration will enhance business growth and hence succession of group lending performance.

Conclusion and further research

The purpose of this study was to evaluate how well financial institutions' lending is performed. According to the study, group lending in Tanzania has several major obstacles, including inadequate information, mistrust, multiple loans, group bias, late repayments, a lack of business skills, money diversification, and business failure. As a result, for group financing to function better, it needs to incorporate adequate individual member assessment, the use of home chattels, group recovery, use of a credit reference bureau (CRB), training group members, registering businesses, and group follow-up. These procedures must be repetitive in nature for every loan cycle and loan increment is not always sufficiently important for the benefit of both financial institutions and borrowers

Although this work advances our understanding, it does have significant restrictions. First, the sample size was capped at 169 participants since several groups were concerned about tax issues and others saw borrowing money as a personal matter that would make them look poor in the eyes of the community. In order to better understand these financing problems, the sample size can be raised in future studies. Second, the study simply evaluated the challenges associated with group lending; subsequent research will evaluate those challenges using a semi-structural equation model (SEM).

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Effects of Lean Supply on Supply Chain Performance in The Selected Wine Processing Companies in Dodoma City

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Abstract

This study established the influence of lean supply on supply chain performance of wine processing companies in Dodoma City. This study adopted a cross-sectional design. The target sample population were 60 including all staff belonging to different sections and levels of the organisational hierarchy of the four stated Wine processing companies namely; Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited in Dodoma City. In regarding data analysis, qualitative and quantitative data were collected through interview and questionnaire, both descriptive and inferential statistics were used in the study. The findings showed that; the study also depicted that supply chain performance can be explained by the lean supply for 82.6%. The study recommended that the managements of Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited should continue putting a lot of emphasis on usage of green designed products so as to raise their level of supply chain performance.

Keywords: Green procurement, Lean supply, Supply chain performance, Wine processing companies, Dodoma, Tanzania.

Introduction

Supply chain nowadays becoming a vital entity to the organizations performance measurement and metrics, has received much attention from researchers and practitioners (Daud, & Zailani, 2011). Lean supply chain practices is a set of organizations directly linked by upstream and downstream flows of products services, finances and information that

collaborate work to reduce cost and waste by efficiently and effectively pulling what is required to meet the individual customer needs. Lean supply chain strategies have their origin in the just in time philosophy, first adopted by many American and European firms in the late 1980s. Its primary elements are: having the only required inventories when needed, enhancing quality by having zero defects, reducing lead times, incrementally revising operations, activity accomplishment at minimum costs (Mukunju, 2014).

Lean supply chain management practices is one of the ways of reducing waste in organizations due to benefits that accrue in adoption of these practices (Wachuma, & Shalle, 2016). By reducing operating costs, lean supply chain management components increased operational performance and allowed businesses to price their goods and services more competitively (Thuranira, 2016; Qureshi, Dinesh & Pradeep, 2007).

Lean supply chain management is the application of Lean Thinking to the end to end supply chain. Traditionally Lean manufacturing was applied within the four walls of a manufacturing enterprise – from the receiving dock to the shipping dock and everything in between. By extending the application of Lean upstream into the management of suppliers, downstream into the management of the distribution network, and upward into the overall integration and management of the supply chain, lean supply chain management improves efficiency throughout the whole supply chain. At every stage of the supply chain, from the manufacture of raw materials by suppliers through the delivery of finished items to the end user, the relentless removal of non-value added time and subsequent decrease of lead time are the main goals of lean supply chain management(Daud, & Zailani, 2011).

Lean management can be incorporated into supply chain management (SCM) to reduce the cost, delivery time, and improve the effectiveness of SCs (Abdallah, & Matsui, 2007; Duarte, Cabrita, & Machado, 2011). Lean is increasingly being used as a way to manage the SC and can become a long-term philosophy for guiding companies in the direction of high-class overall performance. Currently, the implementation of the lean SC approach has become a trend in the global market and is one of the major strategies being adopted by manufacturing companies (Nimeh, Abdallah, & Sweis, 2018).

Globally, the lean supply chain management concept is widely turning into a viable practice for supply chain management businesses (Kimari, & Muli, 2022). In the last three decades,

lean and quality management practices have been employed by the manufacturing organizations but limited studies have analyzed impact of lean and quality practices on green supply chain performance globally (Choudhary, Sangwa, Sangwan, & Singh, 2022). Green procurement practices and management more so lean supply one of the major elements that are adopted by various companies especially in the manufacturing industry to enhance the manufacturing sector to promote environment friendly practices (Quyen, 2020). In response to the Sustainable Development World Summit, sustainable procurement (SP) has become an important agenda for governments seeking to demonstrate sustainable development (McMurray, Islam, Siwar, & Fien, 2014; WSSD, 2002). Europe has the highest adoption level of lean supply despite some barriers China, to a great extent has laid down strategies and formulated policies to promote Green Procurement Practices (GPP) (Liu et al. 2018). In North America, many North American government agencies are implementing purchasing practices that include environmental (and social) considerations that is to say green procurement (Sarhaye & Mirendi, 2017).

In emerging and developing countries like Malaysia, it is under pressure to reduce energy consumption and carbon emissions. In order to minimize the effect of industrial activities on environment, the government of Malaysia has urged all business activities to adopt Green Supply Chain Management Practices especially lean supply (Jaaffar, & Kaman, 2020). In india, Ghosh (2019) noted that lean supply implementation on had effect on firm performance. However, Jayant, and Tiwari (2018) noted that Today's also some of remaining companies have not adopted green supply chain management, due to this environmental performance index (EPI) of India is not good. In Vietnam, Quyen (2020) noted a positive relationship overall between green procurement practices and organisational performance.

In Africa, according to Kaikai, and Mose (2020) over 89% of the purchases done by the mining industry in particular violated environmental safety standards stated in the National Environment Act (2018). In Ghana, Anane (2020) asserts that there is a significantly moderate the relationship between green procurement more so lean supply and organizational performance. Well in South Africa, Sarhaye & Mirendi, (2017) and Public Sector Procurement (2002) noted that while Green Public Procurement especially lean supply is still a relatively new concept.

Due to that, the effects of lean supply practices have been an important research agenda as it has been considered as a vehicle for value creation of an organization through increasing competitiveness of eco-industries, saving money, protecting natural resources, and fostering job creation, which in turn, to sustainable development (Islam, Turki, Murad, and Karim, 2017). This has been manifested through studies that include; Khan, et al (2019) noted that all the green operations, such practices as “green practice in logistics,” have significant impact on organizational performance. Rop, et al., (2021) indicates that considering corporations use of green raw materials, the suppliers use of green purchasing and the use of recycling of products or materials technologically had a positive effect on the performance of public corporations. However, even the few studies available were not conducted in the Tanzanian context. The absence of literature hinders the understanding of how green procurement relates to supply chain performance. Therefore, with inadequate information concerning this topic, investigating specifically the influence of lean supply on supply chain performance of wine processing companies in Dodoma City.

Literature Review

Theoretical review

This section deals with various the theories applicable to this study. Defee et al., (2010) asserts that good research should be grounded in theory. Theories are explanations of a natural or social behavior, event, or phenomenon (Bhattacharjee, 2012). A number of theoretical frameworks have been proposed by researcher relevant to topic and they explain the phenomenon. Multiple theories can be used in research to support and develop the model according to epistemological perspective (Love,2002) exploring the philosophical underpinnings of research (Scotland,2021). The theory of Grey system was discussed below;

Grey system theory

The theory was initially proposed by Deng. J.L in 1982. It is a mathematical model for solving problems that involve uncertainties and for handling systems with incomplete information. Grey means poor, incomplete or uncertain information. Thus, systems which lack information are referred to as Grey Systems (Deng,J.L, 1982). According to the grey theory, information is classified into three categories depending on the degree of information obtained. It is said to be white when it is completely certain, black when it is

unknown and grey when it is insufficient (Yang, Liu, and John, 2014). The grey method was adapted in this study in order to find out whether the selected wine processing companies in Dodoma city take into account to the acquisition of goods, works, services or consultancies whose results have the least possible harmful effects on the environment, human health and safety.

Empirical Review

Kimari, & Muli (2022) sought to study the influence of lean supply chain management practices on the performance of manufacturing firms. Regression analysis results revealed that Just in Time Procurement had an insignificant negative influence on performance, Six Sigma lean supply chain practice had a significant positive influence on performance and Total quality management had an insignificant positive influence on performance. The study concluded that Just in Time Procurement, Total quality management have no notable influence on performance. However, Six Sigma is a good driver of organizational performance. The study recommends that manufacturing companies should deploy more resources towards the implementation of Just in Time Procurement policies.

Mutangili, (2019) examined the influence of green procurement practices in supply chain management and leadership on performance of Kenya Airways and Kenya pipeline. Reverse logistics, green distribution, green purchasing, supply selection and green marketing have a significant effect on overall performance of government parastatals. It is concluded that reverse logistics influences the organizational performance through controlling of environmental risks, proper utilization of materials by customers, results to customer satisfaction and ensures recycling of materials. Green procurement affects the supply chain performance by ensuring production with low environmental impacts, products which are using environmental friendly processes, environmental collaboration with the suppliers, eco-labeled products and adoption of environmental criteria into the supplier assessment systems.

Gachau and Moronge (2018) sought to establish the influence of green procurement practices on the supply chain performance of humanitarian organizations in Kenya. The study noted that; green purchasing, green manufacturer /supplier collaboration, green distribution and reverse logistics had a significant influence on supply chain performance of humanitarian organizations in Kenya.

Mangula, (2019) assessed the factors Affecting the Adoption of Green Public Procurement in Tanzania by taking Government Procurement Service Agency (GPSA) as the case of the study. The study findings show that the adoption of GPP at GPSA was negatively affected because of the insufficiency of capital to implement eco-friendly procurement and lack of training of staff on green procurement by the institution. However, it was observed that though the policy is not clear on green policies, most of the staff were aware of some green procurement policies. The top management of the organisation was willing to support the implementation. It was also discovered that there is the availability of green products in the local markets while imported ones were noted to be very expensive.

Sagile, (2019) assessed focused on factors affecting the adoption of sustainable procurement in public organizations in Tanzania, a case of Public Services Social Security Fund (PSSSF). The study findings revealed that procurement policies and regulations has a significant effect on adoption of sustainable procurement in public institutions. Further the findings indicated that price and availability of sustainable products in the market has a negative effect towards acceptance of sustainable procurement practice in government organizations in Tanzania.

Conceptual Framework

According to Sitko (2013), the conceptual framework is a system of concepts, assumptions, expectations, beliefs, and theories that support and inform your research through explaining either graphically or in narrative form the key factors, concepts or variable and the presumed relationships between them. Independent variable in this study will be procurement contract management that has several dimensions like; Contractor selection, remedies for breach of contracts, monitoring and evaluation. The independent variables include; supplier selection, e- procurement and lean supply.

The dependent variable is supply chain performance that includes; Timely delivery of goods and services, Order fulfillment, Quality of goods and services, and finally Reduction of costs. The Figure 1 below, shows the cause effect relationship between independent variable which is lean supply and dependent variable (supply chain performance) were change in green procurement affects the supply chain performance.

Independent Variables

Dependent Variable

DEPENDENT VARIABLES

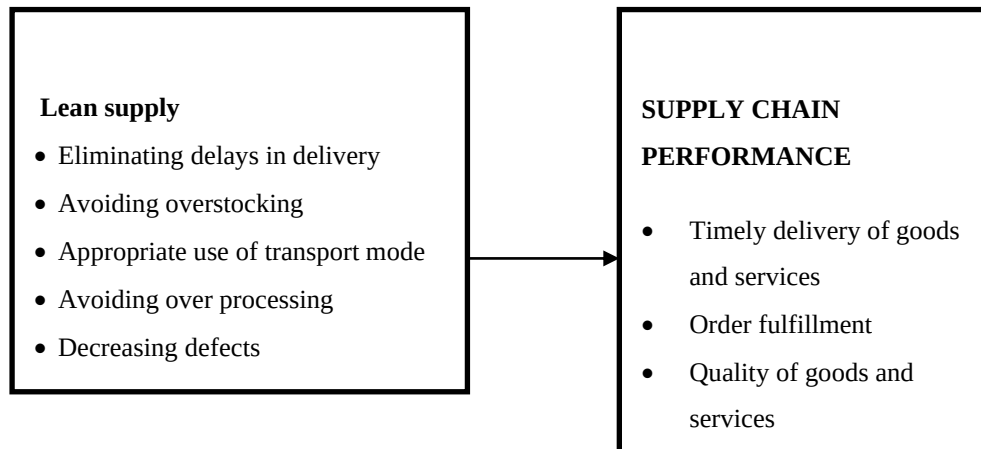


Figure 4: Conceptual Model

Research Methodology

Research Design

This study adopted a cross-sectional design where the researcher gathered data related to effect of green procurement on supply chain performance in the selected wine processing companies in Dodoma City at one point in time. This was a suitable design to be used since the study is a population-based survey and it is relatively faster and inexpensive.

Area of the Study

The study was conducted in Dodoma City located in Dodoma Region. The region was selected because it is a major grape-growing region in Tanzania with many wine companies (TRA, 2020). However, this study purposively sample four wine Processing companies as a case study namely; Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited in Dodoma city. The choice of these companies based on their involvement in the green procurement in

large volume as compared to the rest (TRA, 2018; Epaphra, 2016). Based on the above information, Dodoma City was rendered an ideal area to carry out a study on the effect of green procurement on supply chain performance in the selected wine processing companies in Dodoma City.

Sampling procedures

The study applied both probability and non-probability sampling procedures in selecting the study sample. The study employed a stratified sample technique to select respondents from each company. The stratification based on departmental professionals and the number of employees involved in the green procurement, from each stratum the proportional random sampling was employed to select respondents.

On the other hand, purposive sampling was employed to select companies that produce wine in Dodoma City and key informants. The key informants included top managers of the wine industries in Dodoma. Purposive sampling was used because it provides an opportunity to focus on particular characteristics of the population that are of interest, which best enabled the researcher to answer their research questions. The distribution of the selected sample from each company is presented in Table 1.

Table 6: Distribution of Sample size in the selected Wine Companies

Companies	Population	Total Sample
Central Tanzania Wine Company	18	15
Dodoma Wine Company	17	15
Alko Vintages Co. Ltd	19	15
Dane Holdings Ltd	16	15
Total	70	60

Source: Estimations by the Researcher (2022)

Data Analysis Methods

The data collected was analysed based on the specific objective and the study design. The data analysis process included editing, coding as well as cleaning (Nyakibari, 2020). Both descriptive and inferential statistics were computed with the aid of the Statistical Package for

Social Sciences (SPSS).

Quantitative data

To assess the effect of green procurement on supply chain performance in the selected wine processing companies in Dodoma City, the multiple regression model was used. The Multiple regression model was used to determine the effect of Lean supply on supply chain performance of wine processing companies in Dodoma City. The below regression model shown by equation was used:

$$\text{Supply chain performance (Y)} = \beta_0 + \beta_1 \text{ElDe} + \beta_2 \text{AvOv} + \beta_3 \text{ApTr} + \beta_4 \text{AvOvPr} + \beta_5 \text{DeDe} + \epsilon \dots\dots\dots (3)$$

Whereby:

ElDe=Eliminating delays in delivery

AvOv=Avoiding overstocking

ApTr=Appropriate use of transport mode

AvOvPr=Avoiding over processing

DeDe=Decreasing defects

and ϵ = error income level.

The model was preferred since it allows the researcher to examine the relationship between variables allowing you to model the relationship between variables and be able to make predictions on what one variable will do based on the scores another giving the strength and importance of each of the predictor variables to the relationship

Findings And Discussions

The influence of lean supply on supply chain performance of wine processing companies in Dodoma City.

Multiple linear regression was used to measure the influence of lean supply on supply chain performance of wine processing companies in Dodoma City since it allows relationship

modelling between variables making it possible to do predictions about what one variable will do in regards to the scores of some other variables. This was done to test the null hypothesis that there is no significant influence of lean supply on supply chain performance of wine processing companies in Dodoma City. The hypothesis was tested against three independent variables of information technology namely; eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and finally decreasing defects.

Table 7: Model Summary

Model	R	R ²	Adjusted R ²	Std.error
1	.847 ^a	.826	.936	.24387

- a. Predictors: (Constant), Eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and decreasing defects

Source: Study findings (2022)

A multiple regression analysis was conducted to find out whether lean supply through its independent variables; eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and decreasing defects could significantly predict supply chain performance of selected wine processing companies in Dodoma city.

The results of the regression, in Table 3 above indicate that the model accounted for 82.6% of the variance in dependent variable. This indicates that there were other variables that were not put into consideration that accounted for 17.4% of supply chain performance of selected wine processing companies in Dodoma City that include; Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited.

Table 8: ANOVA Summary

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	36.250	4	81.562	3.795	.000 ^b

Residual	122.065	37	2.059
Total	158.315	41	

a. Dependent Variable: Supply chain performance (Timely delivery of goods and services, order fulfilment, quality of goods and services and reduction of costs)

b. Predictors: (Constant), Eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and decreasing defects

Source: Study findings (2022)

ANOVA was applied to predict the significance of the regression model so as to predict a continuous dependent variable of Supply chain performance from a number of independent variables that include; eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and finally decreasing defects. From the Table above, it was found that the model was significant in linking Supply chain performance with the independent variables (Eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and decreasing defects) since the P-Value 0.000 was less than 0.05.

Table 4.9: The influence of lean supply on supply chain performance of wine processing companies in Dodoma City.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.221	.164		1.347	.179
Eliminating delays in delivery	.385	.068	.742	9.604	.000
Avoiding overstocking	.397	.070	.743	9.573	.000

Appropriate use of transport mode	.364	.065	.621	7.268	.000
Avoiding over processing	.335	.059	.547	6.584	.014
Decreasing defects	.347	.060	.585	6.721	.001

a. Dependent Variable: Supply chain performance (Timely delivery of goods and services, order fulfillment, quality of goods and services and reduction of costs)

Source: Study findings (2022)

The study findings show that eliminating delays in delivery had a positive statistically significant relationship with Supply chain performance at the p-value more than 5% ($p < 0.000$) and with the coefficient at .742. This implies that the unit change in eliminating delays in delivery on average increased the Supply chain performance by 74.2%. This concurs with Kimari, & Muli (2022) who noted that Just in Time Procurement, Total quality management have no notable influence on performance.

Avoiding overstocking had a positive statistically significant relationship with Supply chain performance at the p-value more than 5% ($p < 0.000$) and with the coefficient at .743. This implies that the unit change in avoiding overstocking on average increased the Supply chain performance by 74.3%.

From the study findings, appropriate use of transport mode had a positive statistically significant relationship with Supply chain performance at the p-value more than 5% ($p < 0.000$) and with the coefficient at .621. This implies that the unit change in appropriate use of transport mode on average increased the Supply chain performance by 62.1%.

Furthermore, avoiding over processing had a positive statistically significant relationship with Supply chain performance at the p-value more than 5% ($p < 0.000$) and with the coefficient at .547. This implies that the unit change in avoiding over processing on average increased the Supply chain performance by 54.7%.

Finally, decreasing defects had a positive statistically significant relationship with Supply chain performance at the p-value more than 5% ($p < 0.000$) and with the coefficient at .585. This implies that the unit change in decreasing defects on average increased the Supply chain performance by 58.5%.

From the indepth interviews carried out on the effect of lean supply on supply chain performance of selected wine processing companies in Dodoma City, key informants from Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited gave their views as noted below;

Interviewee 1 stated that, *“ensuring that we supply goods in time has been key in enabling us to have the right quantities of goods at the right time and this has made our supply chain efficient”*.

Interviewee 2 stated that, *“at our company right the right quantities of goods has enabled us to avoid unnecessary costs related to warehouse, security and other charges but also goods going obsolete thereby making our supply chain to perform well”*

Interviewee 3 stated that, *“well through the use of the right mode of transport, we have avoided goods from getting defects and thus supplying the right products that meet the customer needs hence efficient supply chain performance”*

Interviewee 4 stated that, *“having the right quantities and qualities of stock at our company has smoothen our supply chain process”*

Generally from the study findings, lean supply (Eliminating delays in delivery, avoiding overstocking, appropriate use of transport mode, avoiding over processing and decreasing defects) had a positively significant effect on Supply chain performance (Timely delivery of goods and services, order fulfillment, quality of goods and services and reduction of costs) at Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited. The findings are in line with Farah (2013) explored the interrelationship among lean supply chain and firms performance in the many public water s firms in Kenya. He found out that there are three symbiotic lean supply chain management practices namely waste control, standardization and demand management that has great effect on performance. The findings also concur with Ugochukwu (2012) studied on lean practices within the supply chain management on previous studies of research articles. His study showed that procurement practitioners and researchers study lean as a progression into lean management which transforms into a competitive lean supply chain management.

Summary, Conclusion And Recommendation

Conclusion

Basing on the study findings, the study also established that the variation in supply chain performance can be explained by the independent variables (lean supply) by 82.6%. This indicates that there were other variables that were not put into consideration that accounted for 17.4% of supply chain performance of selected wine processing companies in Dodoma City that include; Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited. All in all the study can conclude lean supply had effect on supply chain performance of Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited.

Recommendations of the study.

Basing on the findings, the following are the recommendations;

- i. The managements of Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited should continue putting a lot of emphasis on usage of green designed products so as to raise their level of supply chain performance.
- ii. The managements of Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited should encourage the usage of green packaging material, encourage energy conservation and agitate for reduction in use of harmful substance so as to enhance the level of supply chain performance.
- iii. The government of Tanzania should encourage companies to adopt ICT in all their procurement activities so as to ensure efficiency in the supply chain performance.
- iv. The management of wine processing companies should ensure that information is electronically exchanged with suppliers so as to ensure efficiency in the in the supply chain performance.

- v. The managements of Central Tanzania Wine Company (CETAWICO), Dodoma Wine Company (DOWICO), Alko Vintages Co. Ltd and lastly Dane Holdings Limited should eliminate delays in delivery, have the right stock in place, and appropriately transport goods so as to ensure efficiency in the supply chain performance.

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Assessment Of Profit Percentage Levels of Small Women Vegetable Traders in Dodoma Urban, Tanzania.

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Abstract

This study analyzed the profitability of small women vegetable traders in Dodoma urban in the markets of Majengo, Sabasaba, Chamwino, Chang'ombe, and Chadulu. The specific objectives of the study were to determine mean profit gained by small women vegetable traders in Dodoma Urban, and to determine profit sustainability of vegetable trade of the small women vegetable traders in Dodoma Urban. The study involved both quantitative and qualitative methods which were used to enrich the results. The simple random and multistage sampling techniques were employed to select a sample of 85 women vegetable traders. Documentary review, interviews, and observations methods were employed in data collection. The data were analyzed using descriptive, single budget techniques, benefit cost ratio and Return on Investment calculations to determine the profit percentage levels of small woman vegetable traders in Dodoma Urban. The key informants were purposively selected in order to squeeze a lot of information out of the data collected and describe the major impact of findings on the population. The results revealed profit percentage levels of small women vegetable traders in Dodoma Urban were at a minimal average of 43 percent (43%) and the results also indicated that the profit percentage was equal to one percent (1%) per day. The results also revealed that the mean profit gained by the small women vegetable traders in

Dodoma urban equivalently reach up to TZS 4,350/= per day and 130,500/= per month. It was furthermore revealed that, the profit gained by small women vegetable traders in Dodoma urban is sustainable in the near future the profit gained by small women vegetable traders in Dodoma urban is sustainable in the near future from the score of 1.58 which was ≥ 1 . It was concluded that, the profit obtained from the vegetable business is not enough and cannot satisfy women vegetable traders in Dodoma urban to meet their economic needs and their vegetable businesses. It was finally recommended that; NGOs, institutions, organizations and stakeholders should support Government by capacitating small women vegetable traders on proper business operations and entrepreneurial skills.

Keywords: Small women traders, profitability analysis, women vegetable traders

Introduction

Background Information

The base of global economies is a small business, most organizations in the world are small, but their importance to developed and developing economies and societies is undeniable. According to the World Trade Organization, small and medium-sized enterprises (SMEs) represent over 90 percent of the business population, 60-70% of employment, and 55% of GDP in developed economies (Arnold et al., 2019). As a result, small and medium-sized businesses do not just contribute significantly to the economy, they are the economy. SMEs are an important part of achieving the UN Sustainable Development Goals, for example, to 'promote inclusive and sustainable economic growth, employment and decent work for all (goal 8) and to 'build resilient infrastructure, promote sustainable industrialization and foster innovation (goal 9). SMEs are critical to achieving the SDGs (United Nations (2015), and World Bank 2020).

In Tanzania SMEs contribute significantly to employment creation, income generation and stimulation of growth in both urban and rural areas, in-turn contributing to the development of the country as a whole economically, socially and even politically (Nkwabi, 2019). Recently, Tanzania has observed a progressive involvement of women in business ownership particularly in micro and small businesses in the informal sector. Pella (2020) revealed that, female entrepreneurs in Tanzania play a sensitive role in the SME sector, whereby women-

owned enterprises account for 54 percent of all Small, Micro and Medium Enterprises (SMMEs) and 60% of all micro enterprises. Their main purpose is to support themselves, to raise their families economically to meet their family daily needs and supplement their income (Nkwabi, 2019).

The entry into small business entrepreneurship in Tanzania is usually not seen as a problem since one can start small business at any time and in any place. However, the development of this informal sector has been profoundly characterized by the increasing politicization effort encouraging people to engage in SME and empowerment for poverty alleviation in Tanzania (Amani, 2017). Their involvement in business ownership has not only affected household economies and division of labour but also bears a significant impact on the Tanzania economy (Pella, 2020).

Out of necessity, women select small businesses because they do not require large equity financing, extensive business experience and large amounts of initial capital (Nziku & Henry, 2021). However, these businesses have lower survival and growth rates because of competition in their markets and hence lower earnings potential (Nkwabi, 2019). Women businesses also operate at the “end” of the value chain (Nkwabi, 2019). According to Balele (2016) there are other factors in Tanzania, Dodoma inclusively, constraining the survival and growth of women businesses. Such factors include; women start out their businesses with comparatively fewer resources, their business operating environments are less supportive due to socio-cultural, economic and business environment factors. Consequently, most of their businesses suffer high mortality rates and hardly graduate to medium or large size.

According to Zone (2020) women who involve in small business can support their families financially and can have the time freedom because most of them are not bound by formal working time; so, they can manage their time for work and do home chores. Zone, (2020) argued further that the kind of small business that does not required high skill and huge capital, at the beginning, but gives profit, is selling vegetables. This is because vegetables like cabbage, spinach, tomatoes, cucumbers, onions, carrots, and the like are mostly needed by consumers every day. Along with the increasing public awareness of the importance of maintaining health, one of them is by consuming fresh vegetables which are sources of vitamins that are useful for body health. Therefore, daily vegetable consumption needs make the business of selling vegetables increasingly call for more vendors.

Since the easiness to start vegetable business make more and more people to become vegetable traders, the competition between sellers is increasing as well. However, the profitability of small women vegetable traders is still not well established particularly in Dodoma Urban. Hence there is a need for research that would analyze the profits which are obtained from the vegetable businesses and how it enables women doing the business to grow economically.

Statement of the Problem

The main purpose of starting a small business is to grow and increase one's income, or that of one's family livelihood (Balele, 2016; Amani, 2017; Nimeshi, 2017). Women vegetable traders may start own small businesses to alleviate poverty and other difficult living conditions that are neither preventable nor inevitable especially in Dodoma. Besides having minimal capital, skills and simple technology, Mamboya et al., (2021) pointed out that, there have been various efforts made by the Government of Tanzania such as; reducing levies for vegetable traders, providing entrepreneurial identity cards to women vegetable traders and strengthening markets leadership. The main purpose is to make small women vegetable traders in Dodoma Urban acquire enough profits to raise their economy through the vegetable business.

However, apart from the efforts made by the Government of Tanzania to create positive business environments, it is still not known if small women vegetable traders in Dodoma Urban are getting profit from the vegetable trade. Many studies have been done related to small women vegetable traders in Dodoma Urban but studies that show whether small women vegetable traders get profit or not and to advice where a change is needed for a potential success and market growth of vegetable trade are still limited.

Due to the large wave of increase of small women vegetable traders in Dodoma Urban, it is important to analyze whether these women vegetable traders are gaining profit or not. Without such an analysis of profitability gain, it might not be known if this vegetable business is a kind of business that makes profit or loss. Thus, women vegetable traders may give up and may not be motivated in doing that kind of business. This study therefore aimed to cover the gap by analyzing profits gained by small women vegetable traders in the Dodoma Urban.

The Objectives of this study were to:

- i. Determine mean profit gained by small women vegetable traders in Dodoma Urban.
- ii. Determine profit sustainability of vegetable trade of the small women vegetable traders in Dodoma Urban.

The Rationale of the study

- i. The findings of this study will encourage a focus on elements that will help to maximize the growth and profitability of vegetable businesses.
- ii. The findings of this study will also help policy-makers who are the government officials and various business stakeholders to see a more tangible picture of the entire vegetable business and its profitability for development and livelihood.
- iii. Will enable the policy-makers to impose sound policies, regulations, and strategies that will help in making small women vegetable traders in Dodoma urban to be more commercially oriented and continue growing in an extremely dynamic, competitive, and vibrant market.

Definition of Key Terms

Small women traders: Refer to women who trade goods or services whose transaction sizes are relatively small scaled (in output, inputs and operations), characterized by lower revenue, profitability and turnover, without employees, and small market area (Siahaan & Ayustia, 2019).

Profitability analysis: Defined as the process of analyzing profits which is basically the money gained from sales and subtracting all the overhead costs, which helps entrepreneurs to keep a track of their business' income flows and performance (Puspitaningtyas, 2018).

Women vegetable traders: Are women who sell parts of plants that people or other animals consume as food. The parts of plants collectively to refer to all edible plant matter, including the fruits, leaves, roots, and seeds which are the types of vegetables and can be consumed by animals (Siahaan & Ayustia, 2019).

Empirical Studies

Profitability analysis: Defined as the process of analyzing profits which is basically the money gained from sales and subtracting all the overhead costs, which helps entrepreneurs to keep a track of their business' income flows and performance (Puspitaningtyas et al., 2018).

Profitability analysis of small women vegetable traders is a significant process of analyzing profits gained from sales and subtracting all the overhead costs, which helps small women vegetable traders in keeping track of their vegetable business performance and income flows (Aliyi, 2021).

Profitability gain of small women vegetable traders is the metric used to determine the scope of small women vegetable profit in relation to the efficiency and effectiveness of the amount acquired from their vegetable business after sales and subtracting costs (Aliyi, 2021).

Profitability gain of small women vegetable traders in Tanzania including Dodoma urban, an empirical review was undertaken in respect to studies' done, objectives of the study, the methodology employed and results. That was undertaken in order to verify and justify the literature gap. Tundui (2021), assessed on the survival, growth strategies and performance of women owned micro and small businesses in Tanzania. The study examined the impact of survival and growth strategies adopted by the women micro and small business on the performance of their businesses and used a logistic regression analysis to analyze the data. Whereby their conclusion was, in order to assess business in a simplest way performance one must use enterprise profitability (conduct a profitability analysis).

In a point of view, Tundui (2021) research focused more on strategies that can lead to small business women can use them to get profit and end up classifying the indicator or the way that the researcher can measure the profit obtained in the business of those women without them doing the profit analysis. Furthermore, Mgeni and Temu (2010) carried out their research in Meru District in Arusha region in Tanzania to investigate the profitability and coordination of fresh fruit and vegetable export marketing channels by small-scale farmers in Tanzania. Their study used a descriptive and quantitative analytical technique which were cluster analysis, Gross Margin, and Logistic regression were employed. Findings from that research came up as profitability between farmers trading fresh fruit and vegetable to export and domestic markets was statistically different ($P < 0.05$), meaning that export trade was proved significantly being more profitable.

Mgeni and Temu (2010) analyzed the growth performance of small and medium businesses (SMEs) in processing fruits and vegetables in Tanzania. By analyzing the SMEs growth performance in processing fruits and vegetables in Tanzania it was concluded that if studied enterprises operate under same condition, environments and perhaps more or less the same growth rate, it will take centuries to realize large scale enterprises growth levels, and proposed SMEs to merge and cooperate.

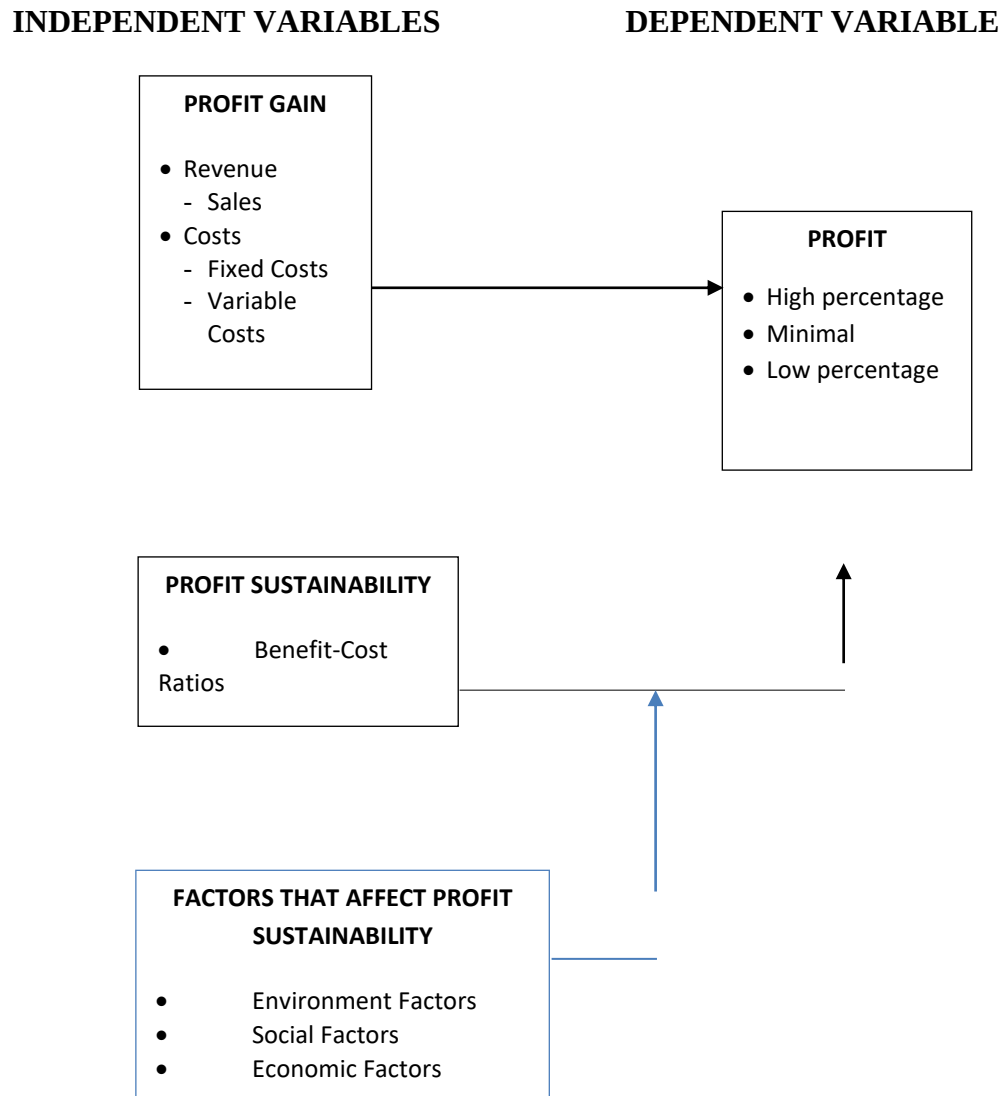
For the case of Dodoma urban, limited studies that coincides with the objectives of this study which focus on profitability analysis of vegetable traders in Dodoma urban. The reviewed empirical studies revealed that, most of the researches conducted on small business highlighted more on the challenges facing small women traders or businesses. Such studies include Hamisi (2011), Jennings and Brush (2013), Kapinga and Montero (2017), and Pella (2020). Other empirical studies focused on how best to develop and operate small businesses. Emrich (2015), focused on small business management De Vita (2014), and small businesses growth and performance Mashimba (2014) and Zone (2020).

However, literature review identifies that there are studies that concentrates on profit sustainability of the small-scale businesses like the study of Zore et al., (2018) that identifies the three key pillars or factors of profit sustainability which are society (social factors), the economy (economic factors), and environment (environmental factors). Moreover, Guijt and Reuver, (2019) study conducted in Tanzania including Dodoma, concurred with the study of Zore et al., (2018) which identified the factors for profit sustainability namely; environmental factors like weather, business location/area of business and, economic factors like sales turnover, levies, rent, transport costs and material purchases and social factors like household size. The study by Guijt and Reuver stated that, if the mentioned factors (Economic, Social and Environmental factors) do not change, then the possibility of profit sustainability level to remain constant and not to change will be high. But, if the factors change in one way or the other, then the profit sustainability level will also change in a positive or negative way.

Moreover, Rymbai et al., (2012) conducted a study on Benefit-Cost Ratio Analysis of Pineapple Orchard in Meghalaya, by dividing the sum of discounted net cash inflow and cash outflows (costs). The rationale of their study was to realize the economic benefits of pineapple the farmers and enhance the production and productivity of pineapple.

Through literature review, profit in this study is identified to be the dependent variable, because it is affected in a positive or negative way by profit gain, profit sustainability through the factors that affect profit sustainability of small women vegetable trade. Regarding objective one, the potential independent variables were the analysis of revenue and cost in which way they affect profitability. Revenue factor like sales affected the profitability margin in a negative or positive way. Likewise, cost including the influencing factors and their indicators like; fixed costs (table rent, utilities, taxes like business license, levies and loan repayment), variable costs (raw materials purchases which are vegetables, commissions, delivery costs and packaging or preparation supplies), and operating costs (transport, utilities and security charges). Moreover, profit sustainability was analyzed by dividing cash inflows to cash outflows which was the implication from Benefit cost ratio analysis. Moreover, profit sustainability level from the indicator of benefit cost ratio was measured through the factors that affect profit sustainability identified by Guijt and Reuver, (2019), which were social, economic and environmental factors. The study, therefore, used these factors and their respective indicators to test their relationship with a dependent variable (profit). The theoretical framework presented in figure 1 indicates the assumed relationship between predictors and a dependent variable.

Figure 1: Theoretical framework



Source: Researchers understanding on Theoretical and Empirical Literature review, (2022)

Methodology

Study design: The study focused to the assessment of profit percentage levels of small women vegetable traders in Dodoma urban for the rationale of encouraging a focus on elements that will help to maximize the growth and profitability of small women vegetable

businesses, imposing sound policies, regulations, and strategies that will help in making small women vegetable traders in Dodoma urban to be more commercially oriented and continue growing in an extremely dynamic, competitive, and vibrant market. In so doing, the study adopted a mixed-method approach containing both quantitative and qualitative methods. A mixed method approach was used to enrich the data which was collected and gain more information relating to specific objectives of the study.

Targeted population: The target population for this study is women vegetable traders in Dodoma Urban. In order to get more data related to women vegetable traders and answer the research questions of this study.

Types of data and Sources: Primary Data were collected by conducting interviews to the respondents and key informants and through open-ended questionnaires which were prepared. Moreover, secondary data were the already collected data from other sources of information, and which had been passed through statistical process. Different documents were reviewed to get secondary information that was relevant to the study. Major sources of secondary information were government reports, Internet articles, official market office files, and vegetable business reports.

Data collection methods: Involved interviews which used both structured and unstructured interviews to gather important data directly from the key informants were District Business Officer, District Extension Officer, Ward Executive Officers, Market leaders, and office bearers from SIDO and TMDA who provided who were a source of information from a wide range in this research work, by using interview guide and checklist. The interview was also conducted to all respondents.

Questionnaire Survey whereby in this method, a questionnaire was used as a tool. This consisted of several questions which were typed in a definite order on a form or set of forms and then printed. The open-ended questionnaires were translated to respondents before inviting their responses.

Documentary review included written documents like government reports, internet articles, and official market office files and reports. The documentary review was used to obtain some other secondary data necessary to answer research questions which include profit gain, factors that affect and profit satisfaction levels of small women vegetable traders in Dodoma Urban. Written documents such as administrative records, books and journal were reviewed.

Sample size

Sample size selection

In situations where population size is doubtful or unknown, Luanglath (2014) proposed another alternative to minimum sample size determination called “n-omega” or Multistage Non-finite Population (MNP) method for minimum sample size determination. The new method as per Luanglath (2014) is based on the specified alpha level. Using the random error α level as the basis to calculate the sample size, MNP method allows the researcher to determine minimum sample size at various level of confidence interval. Based on this approach, a minimum sample size was calculated as follows:

A representative sample of small women vegetable traders was selected based on Lounglath estimates on minimum, maximum and the median sample size. In the first step, the estimated sample size n_1 was obtained via the root of the convectional specified precision estimation (SPE) method as presented in equations I:

$$n_1 = \frac{z\sigma}{E}$$

.....
1

Where, $Z_{0.95} = 1.65$; $\sigma_{N(0,1)} = 1$; and $E = 0.05$ for 0.95 confidence interval. Z is the z value for infinite population at 0.95 per cent level of confidence, σ is the variance and E is the size of random error at 5 percent.

Given this information we get $n_1 = 33$. In this second process minimum sample size n_2 is obtained via SPE as:

$$n_2 = \frac{z^2\sigma^2}{E^2}$$

.....2

Based on the 0.95 confidence interval, we get $n_2 = 1089$. The third stage the square root of the median n_3 of the range of n_1 and n_2 is obtained as:

$$n_3 = \frac{\sqrt{n_1 - n_2}}{2}$$

.....3

Which gives us $n_3 = 22.98$ based on the same assumptions, codifying n_3 into distribution

space ω we get;

$$\omega_{max} = \frac{n_3}{0.01} = \frac{22.98}{0.01} = 2297.83$$

.....4

$$\omega_{min} = \frac{n_3}{0.99} = \frac{22.98}{0.99} = 23.21$$

.....5

Thus, we get the distribution range as:

$$\omega = \omega_{max} - \omega_{min} = 2274.61$$

.....6

Finally, to obtain the minimum sample size n_ω , we take the square root of the median of the range, that is;

$$n = n_\omega = \sqrt{\frac{\omega}{2}} = \sqrt{\frac{2274.61}{2}} = 33.72 \approx 34 \dots\dots\dots 7$$

The minimal sample size was obtained by finding the square root of the median range, assuming a confidence interval of 0.95, with an error level of 0.05. The minimum sample size at this point was 33.72, representing approximately 34 counts. In this survey, the sample size was 34 small women vegetable traders combining two markets, which means every market had 17 number of respondents. Therefore, having five markets resulted to (17 x 5) which was equal to eighty-five (85) respondents. The total sample for the study was eighty-five (85) small women vegetable traders.

In the second stage, markets were purposively selected according to level of performance then in the third stage random selection was employed to select the eighty-five (85) respondents. About eighty-five small women vegetable traders were interviewed using an open-ended questionnaire. A small women vegetable traders' questionnaire and a checklist for key informant interviews were the tools that were used in data collection process.

Content analysis was used to analyze qualitative data while quantitative data were analyzed by descriptive, simple and budgeting, using SPSS and STATA programmes. The qualitative data that were collected through key informant interviews were used to explain the social, economic, demographic and vegetable trade characteristics of surveyed small women traders. Primary data on vegetable trade were used for quantitative analysis in respect to three study objectives.

Sampling procedures: Simple random, purposive and multistage sampling techniques were used in this study. Five markets were selected randomly according the sample frame of approximated ten high performing markets available in Dodoma urban. Multistage sampling was used to narrow down wards and select streets that contain each of the five markets selected and lastly identify the number of respondents who are women vegetable traders available in each market. Purposive sampling was used to select the key informants which were interviewed in this study.

Data analysis techniques: Brandt (1998) described data analysis as a statistical and computation methods used through inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. The statistical and computation methods used in this study were descriptive analysis, multiple regression method, simple budgeting and cost-benefit analysis. The mentioned analytical techniques were used in order to respond and answer the requirements and needs of the specific objectives of this study. Below is a flow of the analytical methods mentioned which are arranged according to specific objectives application to show how they were used, reasons and how results were obtained from the analytical methods;

For specific objective number one, a simple budgeting computation was used to compute the difference between total revenue and total cost which were identified as independent variables in order to obtain the profit and then find the percentage total sum. Revenue included one indicator which was sales and Cost included indicators like fixed costs and variable costs which were summed to acquire total cost. See the formula below;

$$\text{Revenue}(x) = \text{price}(TZS) \times \text{quantity} (kgs)$$

.....8

$$\text{Total cost}(x) = \text{Variable costs} + \text{Fixed costs}$$

.....9

And then followed the computation of Profit after acquiring the Total revenue and Total cost;

$$\text{Profit}(x) = \text{Revenue}(x) - \text{Total cost}(x)$$

.....10

Apart from using simple budgeting computation and the descriptive analysis, cost-benefit analysing was used to compute if small women vegetable business is promising in the growth of vegetable business in the near future through the income generation and profits accumulated of specific objective two.

Benefit Cost Ratio (BCR), was used as an indicator to show the relationship between the relative costs and benefits of a vegetable business, which was expressed in monetary or qualitative terms.

$$BCR = \frac{Inflows}{Outflows} = \frac{Revenue}{Cost}$$

.....11

After the simple budgeting computation in specific objective one and two, descriptive analysis was used to analyse and present statistical data by calculating and showing the standard deviations, mean, median and variance to the analysed data in form of tables, graphs and charts. The reason was to clearly show and present the analysed data gathered from the field.

Furthermore, the level of profit percentage gained by small women vegetable traders was determined by the computation of Return on Investment (ROI). Return on investment (ROI) is a performance measure used to evaluate the efficiency or profitability of an investment or compare the efficiency of a number of different investments. ROI tries to directly measure the amount of return on a particular investment, relative to the investment's cost (Mgeni & Temu, 2010). Mgeni and Temu added that ROI is expressed as a percentage and is calculated by dividing an investment's net profit (or loss) by its initial cost or outlay. The formula used was;

$$ROI = \frac{TR-TC}{TC}$$

.....12

Whereby;

ROI is the Return on Investment

TR is the Total Revenue

TC is the Total Cost

Results

Results on mean profit gained by small women vegetable traders in Dodoma Urban

From the analysis methods of the first specific objective which intended to assess the profit percentage levels of women vegetable traders in Dodoma Urban, a simple budgeting computation was used to compute the difference between total revenue and total cost which were identified as independent variables in order to obtain the dependent variable(profit). Revenue had one indicator which was sales and cost had the following indicators; fixed costs and variable costs which were summed to acquire total cost. Lastly, benefit cost ratio analysis was computed to know if the profit accumulated from vegetable business in Dodoma urban is promising in the near future. The following are the findings of the first specific objective number;

Revenue

Table 10: Descriptive analysis of Revenue of small women vegetable traders in Dodoma urban

	Minimum	Maximum	Mean	Std. Deviation
Revenue accumulated per month	20720.00	7478300.00	807094.4118	1174453.01135
Revenue accumulated per day	690.67	249276.67	27154.5882	39085.28537

Source: Field Data, 2022

It was revealed in Table 1 that, small women vegetable traders with the minimum sales can get sales return of TZS 690/= $\approx$ TZS 700/=, however the minimum sales can reach up to sales of TZS 20,720/=, approximately TZS 20,700/= for the minimum sales per month. To the case of maximum revenue per month, small women vegetable traders with maximum sales can acquire sales return of TZS 249,276.67/=, approximate to the reality of 249,300/= but the

maximum sales can reach up to sales of TZS 747,830.00/=, approximately TZS 747,800/= for the maximum sales per month.

But on average basis from the sample of eighty-five (85) respondents, it was clear that women small vegetable traders can reach up to TZS 807,094/= per month, acquired from TZS 27,154.58/= approximated from TZS 27,200/= per day. Table 1 shows the reality that there are some women vegetable traders whose revenues are much higher than others and can bring in a revenue of Tanzanian Shillings 807, 100/= within a month. And these are those whose businesses are at least big due to the capital invested and the nature of vegetable business. See Table 1.

Cost

Table 11: Descriptive on Profit gained by small women vegetable traders in Dodoma urban

	Minimum	Maximum	Mean	Std. Deviation
Cost incurred per month	8500.00	695000.00	676554.07	1053690.04586
Cost incurred per day	283.33	231666.67	22724.34	35080.69626

Source: Field Data, 2022

Small women vegetable traders in Dodoma urban incur costs in running their vegetable businesses, the study identified two costs: Fixed costs and Variable costs. The findings reveal that, small women vegetable traders incur a minimum cost of TZS 233/= which is equivalent to TZS 250/= per day, however the minimum costs can reach up to TZS 8,500/= per month. To the case of maximum revenue per month, small women vegetable traders can incur maximum costs of TZS 231,666.67/=, approximate to the reality of 231,700/= and reach up to total cost of TZS 676,554.07/=, approximately TZS 676,500/= for the maximum cost incurred per month.

But on average basis from the sample of eighty-five (85) respondents, it was clarified that women small vegetable traders can reach up to TZS 695,000/= per month, and approximately 676,500 per day. Table 2, shows the reality that there are some women vegetable traders whose costs are much higher than others and can bring in total costs of Tanzanian Shillings

807, 100/= within a month. And these are those whose businesses operations require a higher amount expense to be run. See Table 2.

Mean profit gained by small women vegetable traders

Table 12: Descriptive on mean profit gained by small women vegetable traders in Dodoma urban

	Minimum	Maximum	Mean	Std. Deviation
Profit gained per month	-26100.00	736000.00	130540.3441	171389.96496
Profit gained per day	-870.00	24533.33	4351.3448	5712.99883

Source: Field Data, 2022

Profit is the difference that is obtained from subtracting total cost from total cost. From that concept it was revealed that the minimum range of small women vegetable traders may incur a loss of up to TZS 870/= $\approx$ TZS 900/= per day and TZS 26,100/= per month. But in the term of maximum, women vegetable traders in Dodoma urban may be able to gain a profit of 24,533.33 approximately to TZS 24,500/= per day. And gain a profit of TZS 736,000/= per month.

The mean profit gained by the small women vegetable traders in Dodoma urban equivalently reach up to TZS 4,350/= per day and 130,500/= per month. This was after calculating the total revenue minus the total costs incurred by the small women vegetable traders in Dodoma urban. See table 3.

Results on profit sustainability of vegetable trade of the small women vegetable traders in Dodoma Urban

Table 13: Descriptive on Benefit Cost Ratio

	Minimum	Maximum	Mean	Std. Deviation

Benefit-Cost ratio (BCR)	.84	11.20	1.5831*	1.62796

Source: Field Data, 2022

It was revealed that, the benefit cost ratio of small women vegetable traders is promising in the near future, since the BCR was greater than one or equal (≥ 1). The results after the analysis in Table 4, show the mean score of small women vegetable traders in Dodoma urban was proved to be 1.58 which means that despite of the fact that a woman vegetable seller can acquire a loss to some days but still can be able to acquire profit too.

Results on the profit percentage levels of small women vegetable traders in Dodoma Urban

Table 5: Descriptive on Profit percentage of small women vegetable traders in Dodoma Urban.

Total Revenue (TZS)	Total Cost (TZS)	Profit percentage per month	Profit percentage per Day
37,826,541	11,318,620	43%	1%

Source: Field Data, 2022

It was revealed that, the profit percentage of small women vegetable traders in Dodoma urban was forty three percent (43%) per month, and the results also indicated that the profit percentage was equal to one percent (1%) per day by dividing the profit percentage gained per month by total number of days per month (30 days).

Discussions

Discussions on mean profit gained by small women vegetable traders in Dodoma Urban

Based on the obtained results from Table 3, the mean profit gained by small women vegetable traders in Dodoma urban was proved to have a minimal average score apart from the benefit cost ratio, the business seemed to be promising in the near future with a score of 1.58 which was ≥ 1 . However, the revenue acquired by small women traders who sell vegetables differs in a very little amount from the costs they incur where the difference is only TZS 130,500/= on

maximum average and TZS 4,350/= only on minimum average. See Table 3.

Honoré (2019), conducted research in Almeria that was similar with this research, and the results on the profitability analysis fruit vegetables trade did not differ from this research results. The study conducted by Honoré (2019) found that the profit was still in minimal average score and added that, the profit gained from the fruit vegetable business cannot qualify in sustaining the fruit vegetable business and starting new business ventures, instead the profit gained can only sustain the owner in operating the venture and sustaining his/her own basic needs.

The case of mean profit gain seemed different from the case of Ghana in Upper West region, Abu (2020), conducted research on profitability of vegetable marketeers in Ghana and observe that, urban vegetable market was more competitive but generally marketeers seemed to rely on increased sales volumes to create profits, with urban marketeers being more able to create higher profits. This case however differed from the results of this research whereby the profits gained by small women traders was at a minimal average state of 43 percent (43%) of the mean average meaning that the profit gained was neither high nor low. The results from this research does not contradict nor criticize the results obtained by Abu (2020) in Ghana, since the areas of the study differ in geographical position, demand and population.

In the case of Tanzania, from the study conducted by Pella (2020), revealed that small business profitability generation suffer since they face several challenges, which contributes to the lack of higher profitability. The study by Pella (2020) mentioned the challenges as indicators for small business persons, one of which was the lack of education on business operations. However, Pella's research is also in similar line with the results of this research as the availability of profit for small women vegetable traders in Dodoma urban was proved to have a minimal average of 43 percent (43%) of the mean average.

And this indicated that, profit gaining for small women vegetable trading in Dodoma urban is still stagnant and perhaps more efforts to raise and rescue that incidence are needed from various stakeholders as well as policy makers. The business officer of Dodoma City Council claimed that:

“We have a big responsibility in ensuring that we monitor small women vegetable traders in increasing profits in their businesses by helping them to minimize the

challenges through creating good environment, preparing and implementing sustainable policies for the good of vegetable business in Dodoma urban...” (Source: an interview with Dodoma City Council Business Officer done during study in June 2022).

From the above discussions, the research question of “What is the percentage level of profits gained by small women vegetable traders in Dodoma Urban?”, based on specific objective number one was answered by the score of 43 percent (43%) per month and one percent (1%) per day which was obtained from the difference between total revenue and total cost dividing by total cost incurred by the small women vegetable traders in Dodoma urban. This implied that, from every 1 TZS invested by small women vegetable traders, it gives a profit of 43% per month on 43 cents as profit for every 1 TZS per month or 1 cent for every 1 TZS per day.

Discussions on profit sustainability of vegetable trade of the small women vegetable traders in Dodoma Urban

Zore et al., (2018) identified the three key pillars or factors of profit sustainability which are society (social factors), the economy (economic factors), and environment (environmental factors). Moreover, Guijt and Reuver, (2019) study conducted in Tanzania including Dodoma, concurred with the study of Zore et al., (2018) which identified the factors for profit sustainability namely; environmental factors like weather, business location/area of business and, economic factors like sales turnover, levies, rent, transport costs and material purchases and social factors like household size. The study by Guijt and Reuver stated that, if the mentioned factors (Economic, Social and Environmental factors) do not change, then the possibility of profit sustainability level to remain constant and not to change will be high. But, if the factors change in one way or the other, then the profit sustainability level will also change in a positive or negative way.

Moreover, Rymbai et al., (2012) conducted a study on Benefit-Cost Ratio Analysis of Pineapple Orchard in Meghalaya, by dividing the sum of discounted net cash inflow and cash outflows (costs). The rationale of their study was to realize the economic benefits of pineapple the farmers and enhance the production and productivity of pineapple.

In this study the results indicated that the profit gained by small women vegetable traders in

Dodoma urban is sustainable in the near future by $1.5831 \geq 1$ (See table 4).

Conclusion And Recommendations

Conclusion

It was concluded that, the profit obtained from the vegetable business is not enough and cannot satisfy women vegetable traders in Dodoma urban to meet their daily economic needs and also to develop and sustain their vegetable businesses. Furthermore, this study revealed that the profit obtained from this vegetable business is a minimal average of 43% from deriving total revenue less by total cost divide by total cost. The mean profit gained by the small women vegetable traders in Dodoma urban equivalently reached up to TZS 4,350/= per day and 130,500/= per month. This was after calculating the total revenue minus the total costs incurred by the small women vegetable traders in Dodoma urban. This implied that, the mean profit ratio obtained per day and per month was at a very low level according to the profit gain expectations of majority of the small women vegetable traders, and it gave an indication that small women vegetable traders did not get a promising profit that was enough to grow their vegetable business as well as increase their economy.

Furthermore, it was concluded that, the profit gained by small women vegetable traders in Dodoma urban is sustainable in the near future the profit gained by small women vegetable traders in Dodoma urban is sustainable in the near future. And that even if the mean profit of small women vegetable traders was very low, but still their vegetable businesses would continue to survive without any hindering problem because the benefit-cost ratio was proven to be $1.5831 \geq 1$ (See table 4). Furthermore, the study also focused on looking factors that can lead to the benefit-cost ratio changing (increasing or decreasing from the current 1.5831 score). The factors included were economic factors (increase in fees, sales turnover, competition, transport costs, cost of goods to be sold and access to credit), social factors (household size), and environmental (climate change, availability of products for sale/vegetables, and place of business). However, those factors did not seem to hinder the sustainability of profit for small women vegetable traders in Dodoma urban. This implied that, if the social, economic and environmental factors will later change in a negative or positive way then directly and the level of benefit-cost ratio that exists at the moment will change by increasing or decreasing from 1.5831 and result to the majority of small women

vegetable traders in Dodoma urban close their vegetable businesses or their vegetable businesses continue to flourish and grow more.

Recommendations

This study recommends that, the Government (through the Ministry of Industry and Trade) should consider more on supporting small women vegetable traders by providing them with a sustainable business education, including providing small women vegetable traders with proper training on the management and operation of the vegetable business, book-keeping and recording, and mostly entrepreneurship skills.

This study further recommends that; the Government through the Parliament, Ministry of Industries and Trades and the Ministry of Finance should put policies that are business environment users friendly. These include the formulation of various policies related to the transportation of materials (vegetables), the availability of vegetables at a cheaper cost from farmers and suppliers, by reducing cost of production with reduced inputs prices, the availability of low-interest loans, and reduce levies costs.

Apart from the government, the study further calls financial institutions (formal and informal) to broaden small women vegetable traders in Dodoma urban with the ability to access credit with reduced interests to stimulate the development of small women vegetable businesses and increase the profits gained from their businesses.

Non-Governmental Organizations (NGOs), institutions, organizations and other stakeholders should support government by capacitating small women vegetable traders on proper business operations and entrepreneurial skills. This will help these women expand their understanding of business-related activities and thus enabling them to be able to afford the operations of their businesses. In other words, to minimize the probability of higher loss.

And lastly, the study recommends that Market leaders together with local government leaders should ensure that the environments surrounding the markets outside and inside the markets are clean regularly, in order to avoid the outbreak of diseases but also to create a good environment that attract more customers to come to the markets.

Areas for further study

Another study has to be conducted on small women vegetable Dodoma urban to determine the hindering factors causing the lack of credit access. Likewise, another study should be conducted to classify the reasons that lead to small women vegetable traders not getting or accessing business training and coaching.

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Effect Of Inventory Management on Service Delivery in Public Sector: A Case of Office of Registrar of Political Parties

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Abstract

This study was intended to assess the effect of inventory management on services delivery in public sector: A case in Office of Registrar of Political Parties. The specific objective was to investigate the influence of staff competence on service delivery in public sector. The study employed a cross-section research design and a sample of 44 respondents was selected using a simple randomly sampling technique. Data collection methods included questionnaire and interview. Data were analyzed using descriptive statistics and correlation analysis. The study finding shows that there is a positive relationship between the staff competence and service delivery. The study concludes that staff competence was important factors in inventory management that influence service delivery in Office of Registrar of Political Parties. Therefore, the study recommends that, to improve staff competence on service delivery, the study recommends that, the Office of Registrar of Political Parties could provide training on inventory management for staff members.

Key words: Inventory management, service delivery, Staff competence, Office of Registrar of Political Parties.

Introduction

Every business nowadays strives to minimize supply chain costs, stockpile as little as possible along the way, and meet or exceed their customers' expectations for service (Sexton, 2007). Because of this, expenses have been cut, efficiency has improved, and the company's output has increased. As a result, demand has become more volatile, increasing the importance of stocking adequate quantities of goods to ensure smooth operations in the

supply chain for some businesses. Excess inventory in the supply chain, according to Dryden and Brownell (2012), impedes cash flow, which could have a detrimental impact on the effectiveness of the organization's service provision.

Governments in poor countries have a lot of issues, and poor inventory management is one of the biggest ones. The system is too unstable and lacks the necessary strength to effectively deliver services to those who require them. Mismanagement of inventory, both in terms of under- and over-stocking, appears to have exacerbated the situation (Okwaro, 2017).

Delivery of goods and services is hampered by poor inventory management in Africa to a much greater extent than in other parts of the world (Hendricks & Singhal, 2005). The goal of the procurement department in the public sector is to ensure timely, high-quality service delivery by supplying the appropriate goods and services to the various user departments. So that everything in the buildings and on the grounds is supplied and delivered at the proper time, they have an inventory management system in good working order.

The government might save money and boost supply chain efficiency by adopting an inventory management system. Users' requirements must be met for governments to achieve their goals. There is no business that doesn't put its customers first, and those customers' requirements are prioritized based on their unique characteristics and the interests they (Okwaro, 2017).

The study's author anticipated that effective inventory management strategies would be put to use by government agencies to reduce customer complaints about service quality, which often come from a lack of funding for service providers (Merdard, 2013). As a result, the researchers here set out to measure inventory management's influence on public service provision. The study focused on influence of staff competence on service delivery in Office of Registrar of Political Parties

Statement of the Problem

Many public sector organizations have struggled to develop and implement their service delivery strategies because their inventory management systems are not completely deployed (Berman, *et al.*, 2011). Fifty percent of public sector costs can be attributed to a lack of inventory management systems (Choy, 2012). Outdated inventory management systems and technology have had a negative impact on public service delivery (Republic of Kenya, 2012).

Similarly, in Tanzania, the failure to effect the management of inventory has been claimed to affect the service delivery. Typically, reported example that are associated with poor inventory management systems are several, including failed water projects Controller and Auditor General (CAG, 2019).

In a similar manner, Gabriel (2020) stated that, now, the most pressing issue facing Tanzania's public sector is complaints from users over delayed deliveries of ordered supplies. Some of Tanzania's about 6,500 health facilities have been accused of using inefficient inventory management methods, which has led to a rise in consumer complaints in the country's public health sector (Gabriel, 2020).

Studies about inventory management looked at how it affects customer satisfaction in manufacturing firms, how it affects service delivery in public hospitals, and how it affects the management of inventory control systems in higher education. These studies focused on inventory control methods like merchant-managed stock, collaborative planning, forecasting and replacement, programmed recharging, quick framework, and material requirement planning (Rukiya & Kibet, 2019; Achieng, *et al.*, 2018; Ondyeki, 2019; Thogori & Gathenya, 2014). So, this study filled in the gap by looking at how inventory management affects how the Office of the Registrar of Political Parties gives services. Specifically, the the study focused on how staff competence influence service delivery in Office of Registrar of Political Parties

Relevant Studies

Nzuza (2015) investigated the elements influencing the retail division's success in inventory control in Durban's EThekweni Municipality. His research led him to the conclusion that weak inventory controls and a lack of trained employees are the direct result of an inadequate staff. Due to the study's finding that store employees aren't particularly well-versed in the procurement process, it was suggested that the store division invest in training for its employees in order to boost inventory controls and management throughout the company and better inventory control planning.

According to the findings of Mgeni and Peter (2016), who looked at the specific situation of the Arusha Central Police Station in Tanzania, there are a number of factors that influence inventory management there. His research revealed that the Arusha Central Police Station's

procurement division lacked any qualified personnel. The study found that insufficient resources and skilled staff were among the factors affecting the efficiency of inventory management in the Tanzania Police Force at the Arusha Central Police Station. As a result, the study recommended that the Tanzania Police Force recruit an adequate number of staff with the proper and necessary skills and qualification regarding inventory controls and management.

Methods

Research Design

Research design is a blueprint or plan of action that outlines how and where to get the needed information, how to analyze it, how to meet the research goals, and how to find solutions (William, 2006). The cross-sectional research design was used for this study. The design is most useful because it involves getting information from different people one at a time (William, 2006).

Population of the study

The study targeted population of employees from the office of the registrar of political parties. This comprised employees from procurement department, finance department, internal auditors and User Department.

Sampling procedure

This study used a method of sampling called "purposeful sampling." Purposeful sampling is a very useful and effective sampling method that lets a researcher choose a sample based on what he knows about the population, the research elements, and the goals of the study. This method of choosing samples is also based on the researcher's judgment and the goal of the study.

Sample size

In this study sample size was drawn from 50 respondents who are responsible with inventory management in the office of the registrar of political parties. The criteria of selecting such respondents based on the fact that they had relevant information relating to effect of inventory management on services delivery in the Office of the Registrar of Political Parties. Therefore, Yamane formula (1967) used to calculate the sample size for this study as follows:-

$$n = \frac{N}{1 + N(e)^2}$$

Where n=Sample size,
N=Number of respondents,
e=Constant (95% confidence level and ±5% precision)

$$n = \frac{50}{1 + 50 (0.05)^2} = 44$$

Therefore, the sample size for the study comprise 44 respondents

Table 14: Sample Size for each department

S/N	Department	Population	Number of target respondent
1	Finance and accounts	6	5
2	Human resource and administration	4	4
3	Procurement units	3	3
4	Head of units	5	4
5	User Department	32	28
	Total	50	44

Source: Researcher, 2022

Data Analysis Technique

Both qualitative and quantitative data were used to analyze the data for the study. The qualitative data was analyzed using content analysis, in which data from open-ended questions was put into themes based on the goals of the research and reported in a narrative form. Researchers chose content analysis because they can count and analyze the number, meanings, and relationships of certain words, themes, or concepts. The qualitative data was used to back up the data that was based on numbers.

Quantitative data like the mean, frequency, percentage, and the standard deviation were used in descriptive statistics to show the central tendency. While correlation analysis was used as part of the inferential statistics method. With the help of the Pearson product-moment correlation coefficient, the researcher looked at the relationship between the independent (lead time, staff competence, and record keeping) and dependent (Service delivery) variables

of the study. Correlation Coefficient was used to see if independent variables depended on each other and if independent variables were linked to the dependent variable.

Results and Discussion

Descriptive Results

This section intended to present the descriptive statistics results the related to influence of staff competence on service delivery in public sector. A five-point Likert scale was employed from 1 (Strongly Disagree) to 5 (Strongly Agree) while mean score was used to measure central tendency of the total response. The responses were shown in Table 2.

Table 2: Descriptive results on staff competence on service delivery

Statement	A	N	D	SD	Mean
Our organization conducted several training relating to inventory management	8 (18.2%)	0(0%)	17(38.8%)	19 (43.2%)	1.31
Our staff have enough qualification to perform inventory management activities	11(25%)	9(20.5%)	15(34.1%)	9 (20.5%)	2.12
Our staff have enough skills related to inventory management activities	22 (50%)	0(0%)	18(40.9%)	4(9.1%)	3.62

Note: SA= strongly agree, A= Agree, N=Neutral, D= Disagree and SD= strongly disagree

Source: Field data (2022)

Training

Results in Table 2 revealed that, majority of respondent (43.2%) strongly disagree that, ORPP conducted several training relating to inventory management followed by 38.8% who were disagree and 18.2% were agree. Moreover, the mean score of the total response was 1.31 which is below the mean level of 3.0 imply that training relating to inventory management not conducted in ORPP.

However, the findings not concur with observation of fourth respondents during interview who state that:

“...In my organization PMU staff is given training on annual basis. Through training it enables staff to perform inventory management activities...”

The study findings concur with those of Medard (2016) found that only 22.5% of respondent have attend training and seminars which is unscheduled, related to on inventory management in parastatal organizations.

Qualification

Results in Table 2 revealed that, majority of respondent (34.1%) disagree that, staff have enough qualification to perform inventory management activities followed by 25% who were agree while 20.5% were strongly disagree and neutral respectively. Moreover, the mean score of the total response was 2.12 which is below the mean level of 3.0 imply that staff have not enough qualification to perform inventory management activities.

The findings not contradict with explanation provided by fifth respondents during interview who state that:

“...In my organization has right qualification related to inventory management that enables staff to perform their activities accordingly...”

Level of Skills

Results in Table 2 revealed that, majority of respondent (50%) agree that, staff have enough skills related to inventory management activities followed by 40.9% who were disagree and 9.1% were strongly disagree. Moreover, the mean score of the total response was 3.62 which is above the mean level of 3.0 imply that in ORPP staff have enough skills related to inventory management.

The findings supported by sixths respondents during interview who state that:

“...The ORPP staff at PMU has right skills to conduct inventory management that helps, in overcoming various challenges in performing activities...”

This study concurs with Nzuza (2015) on the study on factors affecting organization's success on inventory control in store division of the EThekweni Municipality in Durban. From his study he concluded that, inadequate staff's skills due to lack of employees proper training on inventory management and control, will results to poor inventory controls and ineffectiveness

Inferential Statistics Results

The study then sought to find out whether there is any significant relationship between the staff competence and service delivery. The Pearson correlation coefficient (r) was employed to establish the relationship between the staff competence and service delivery. The findings presented in Table 3 show that there is a weak positive relationship between the staff competence and service delivery ($r = 0.317$, $p\text{-value} = 0.000$). This implies that any unit increase of staff competence in inventory management will increase the service delivery in ORPP.

Table 3: Correlation between Staff Competence and Service delivery

		Staff competence	Service delivery
Staff competence	Pearson	1	0.317**
	Correlation		
	Sig. (2-tailed)		0.000
	N	44	44
Service delivery	Pearson	0.317**	1
	Correlation		
	Sig. (2-tailed)	0.000	
	N	44	44

**Correlation is significant at the 0.01 level of significance (2- tailed)

Source: Field data (2022)

Conclusions, Recommendation and the Area for Further Research

Conclusion

The study found that there is a weak positive relationship between the staff competence and service delivery. Therefore, the study concludes that, to low extent staff competence affects the service delivery in ORPP.

Recommendation

To improve staff competence on service delivery, the study recommends that, the ORPP could provide training on inventory management for staff members. The organization could also provide resources on inventory management, such as manuals and software.

Area for Further Research

- i. The similar study should be carried out to other public sector, since this study was limited to Office of Registrar of Political Parties.
- ii. Another, study should be focus to other factors, since this study was limited to three factors of inventory management that affect service delivery.

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Determinants of Procurement Contract Management on Non-Consultancy Services Performance.

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Abstract

This paper analyzed the determinants of procurement contract management on the performance of non-consultancy services in higher learning institutions in Tanzania. The agency theory was involved to support this study. The study involved 130 respondents selected from St. John University, University of Dodoma, and the Institute of Rural Development Planning at Dodoma. Judgmental and Stratified sampling procedures were involved to select samples in this paper. Data were collected by questionnaire, interview and secondary sources. In the part of the analysis, the multiple regression analysis was applied in this paper. This paper revealed that contract monitoring is the key determinant for the successful procurement contract management on the performance of non-consultancy services. Regression analysis depicted that this determinant has a positive influence on the performance of non-consultancy services. A unit increase in communicating resulted in a 58.5% increase in performance for non-consultancy services, a unit increase in payment linked to satisfactory work produced a 58.7% increase in performance for non-consultancy services, and a unit increase in the regular programmatic report produced a 14.1% increase in performance for non-consultancy services. According to the findings, higher education institutions' excellent communication, consistent programming reporting, and payment practices lead to superior non-consultancy services performance. It was also recommended that contracts that demand payments be made monthly or quarterly, either in advance of or concurrent with the service provider's billing, should also demand that the service provider give programming reports. Program reports should be directly relevant to the contract's provisions.

Keywords: Procurement, Contract, Contract Management, Non-consultancy services.

Introduction

Introduction to the Problem

In both rich and emerging economies, public procurement is commonly considered a key discipline for enacting social and economic reform. Tanzania is one of both industrialized and developing nations where public procurement is the biggest domestic market. Any nation's economic growth is mostly attributed to public procurement because it facilitates significant economic activities. In most developing countries, the government spends about 20% of GDP; hence it's crucial to have a proper budget (Kimambo, 2020). In Tanzania, non-consultant procurement makes up more than 70% of the budget. After the contract is signed, this includes all actions taken by the procurement authority and non-consultant to make sure that party's obligation to contract was followed. It was typically a difficult subject (Triple, 2018).

To assess the non-consultant service provider with whom he would build a long-term partnership, fulfillment of the non-consultant must be properly managed (Mwitango, 2021). In terms of Value for Money, and procurement division including commodities and works and consulting services perform quite well. However, the effectiveness of non-consultancy services has never been satisfactorily demonstrated by academics, leading to scholarly studies into the many causes.

Providing justice and transparency, minimizing conflicts of interest, increasing efficiency and productivity, and providing justice and transparency are the objectives of managing a non-consultation contract. These objectives are to provide close monitoring of the effectiveness of service delivery to competent, financial, and intangible resources such as knowledge and skills. The public procurement system has a significant social, economic, and developmental impact on equality of opportunity, national interest protection, achieving government goals, and contract management (Mutua, and others. 2020).

Effective contract management has significant socioeconomic and development repercussions when it comes to the procurement of non-consultancy services (Mutual, 2020). Non-

consultancy services procurement has gotten a lot of attention in recent years, owing to the fact that such services were disregarded and inadequately ruined from the perspective of procurement and contract administration (Mlinga, 2015). The Tanzanian government took action by passing many law stipulations to regulate contract management in public procurement (PPRA, 2013). Given all of these clearly defined criteria in the regulations, and the Public Procurement Act with amendment the Public Procurement Regulatory Authority (PPRA) recognizes that many PEs are not properly overseeing their contracts, and that the procurement process for many PEs "ends" almost immediately after contract award. However, in terms of procurement and contract administration, the acquisition of service provider was still ignored and badly managed (Mlinga, 2015). 30% of Tanzania's audited procurement contracts (in 30 PEs) were reported to not have been completed in line with the conditions of the contract (PPRA report, 2019; Juan, 2019). As a result, the study investigated determinants for procurement contract management on Performance of Non-consultancy services.

Objective of the Study

The current paper assessed the determinant for procurement contract management on non-consultancy services in higher learning institution. Specifically, on the influence of contract monitoring on non-consultancy services.

Literature Review

Theoretical Review

Agency Theory: In 1976, Neckline invented the idea of an agency. This is the working arrangement between two people, one of whom is referred to as the director and the other as the principal. The two parties (principal and agent) form an agency relationship and operate on behalf of each other when one member, the principal, delegated tasks and decision-making to another, the agent (Eisenhardt, 2014). Knowledge is asymmetrical, everyone acts in their own self-interest, and agents are more erratic than the principal. Health and Norman (2004) assert that procurement managers in public servants concerned with public procurement must play the agent role for elected representatives. Chiappori (2002) explain the underlying principle of the contract theory is that there should be a clear understanding of the needs of

the principal and ability of the agent to meet these needs competently. The theory becomes relevant to the study as it highlights the need for strategic planning in procurement. Mutua, *et al.* (2014) mentioned that the main challenge for the public entity is to understand the importance of contract management. Unfortunately procuring entities give full attention to the contract selection process, but then walk away from the procurement once the contractor is in place.

In this study, the primary idea of agency should be applied, with the case organization serving as the principal and service providers or agents serving as the Agents. The code was picked because it emphasizes the need for clear contract terms and conditions as well as a system for impartially assessing contractor performance. If the contract criteria, roles and responsibilities of the CM team, and KPIs are clearly stated, leading in the prompt implementation of the agreed-upon performance level, the manager and agents can more successfully satisfy each other's requests. The theory emphasizes the agent's capacity to fulfil principle's role. The theory focuses on the agent's capacity to execute the principals will. This theory offers an approximate assessment of how well the service provider performed in its capacity as an agent in fulfilling regulatory obligations.

Empirical Review

Mohammed (2015) studied the "Effects of Performance Contracts on Banking Sector Operational Efficiency." Descriptive survey research was used for this study. One of the causes of subpar procurement performance in the study was found to be bad contract management practices. The report suggested more research on contract management best practices in order to enhance the effectiveness of Kenya's procurement system.

Mungai (2014) investigated "Effective contract fulfillment and administration." A census technique was used as a sample tool. Data was gathered using a questionnaire and an interview schedule. The study revealed that successful contract execution depends on thorough pre-contract planning centered on results and effective contract preparation. Additionally, their research has shown that good contract administration requires proper resource allocation, indicating that government budgetary commitment is necessary.

Kingoto and Ismail (2021) Assessment of the impact of procurement contract management on the effectiveness of Nairobi County government. An investigational case study design was used. A census technique as a sample tool, and a questionnaire and an interview schedule were used to collect the data. Findings from the study revealed that management of government and non-government organizations negotiate contracts with the best terms possible in order to boost organizational performance. They also suggest that best practices for contract review, contract dispute resolution, and compliance contracts be developed and put into practice.

Kibona (2011) explored "Effects of contract management on organizational performance." The researcher employed a case study strategy as well as primary and secondary data collection approaches. A questionnaire and an interview guide were used to gather the majority of the data. The paper claims that there is a dearth of skilled contract managers and that past attempts at contract management have failed. As a result, he underlined how crucial it is for contract managers to have enough expertise in the field in which they are responsible.

Sophia (2020) did research on the elements influencing the effectiveness of non-consulting contract management in the public sector. The researcher used the case study method with 80 respondents, collecting information from both primary and secondary sources. Data was gathered using surveys and in-person interviews, and a mixed methods analysis using quantitative and qualitative procedures was carried out to validate the research findings. The study's findings indicate that TPDC adheres to the PPA's procurement procedures. Techniques for managing contract consists management and monitoring, environmental protection, and health and safety, for example. The analysis found a positive but insignificant relationship between efficient contract management and monitoring and management, environmental protection, health and safety, and service level agreements. According to the report, TPDC should use meetings, seminars, and workshops to educate its staff on PPA, and PPRA should create training materials on it as well as contract management guidelines, buyer and supplier relationship management guidelines, and record keeping.

Mnango (2017) assessed effectiveness of Tanzania procurement contract management in obtaining value for money. According to the findings, the CBE obtained good value for money in its procurement contracts by putting in place a successful contract management

system and choosing the proper procurement techniques, which influenced competition and made trustworthy contractors affordable. The parties to a contract achieve their goals by completing the work on schedule and paying the successful bidder in promptly.

Aziku (2021) conducted a study on the effects of contract monitoring and performance evaluation for non-consulting services in Tanzania. The study employed a cross-sectional design due to the simultaneous collection of data from TARURA respondents. Through in-depth questionnaires and interviews, the researcher obtained a significant amount of data. The study found that, when monitoring and performance evaluation of the TARURA procurement contract were measured using the presence of technical workers, service delivery, progress report, service delivery inspection, and risk management accounted for 52.7% of the effects. As a result, other factors were disregarded, with service level agreements contributing 47.3% of the performance of the TARURA procurement contract. Schedule, progress report, audit, technical personnel availability, and service delivery measurement all showed a positive relationship to procurement contract performance. The statement recommends that TARURA keep monitoring the tendering processes to make sure they are adhered to as closely as is practical. The selection, effectiveness, and resource management of consultants will all be enhanced by TARURA's procurement management committee as they continue to investigate the proper application of procurement rules and regulations.

Masanja and Mgawe (2021) explored the impact of procurement on the performance of non-consulting service in Tanzanian NHCs. The majority of the information was gathered using a questionnaire and an interviewing guide. Using descriptive and contextual analysis, the data was examined. The most erective consultants were shown to be linked to lowering the potential for conflict of interest between service providers and the organization's management, which has an effect on worker productivity. Deregulation and contract monitoring were also shown to lower risk and increase settlement. Because the contract component was not included in the study's topic, it was prejudiced. This study was biased since the contract component was not taken into account. Furthermore, other public institutions were ignored because the NHC was the only public agency picked. The researcher believes that additional study is required to fully understand the function of procurement contract management in non-consulting activities in public organizations.

Methodology

This study employed a mixed design that combined qualitative and quantitative data. This particular study method was chosen since it could give information about the respondents' perspectives right away. This design was also used because it helps to gain a more complete picture than a standalone quantitative or qualitative of the study in order to expand and strengthen a study. This provided a clearer picture of the research by more accurately describing the connection between contract management and non-consulting procurement performance.

Study area

This study was conducted at UDOM, Saint St. John University, and the Institute of Rural Development Planning. All selected higher learnings are located in the Dodoma region, served as unit of study. The choice of the study area is related to the numerous non-consultant services being provided, where any management flaws may affect service delivery to students, the availability of the necessary data, and the researcher's ease of access to the site.

Sampling and sample size

The study employed both probability and non-probability sampling techniques. Higher learning institutions in Dodoma were selected using a purposive sampling procedure. In addition, stratified sampling procedure was also used to select respondents at higher learning institutions from a variety of departments. In this procedure, the researcher chose respondents at random from the departments' sub-groups. For the study's conclusions to be valid, the sample size must be regulated and appropriate because multiple regressions were used to examine the relationship between the variables. For the majority of study settings, at least 50 and possibly 100 observations are needed to maintain power, according to Hair *et al.* (2013). The lowest observation-to-variable ratio in multiple regressions is 5:1, although 10:1 is the ideal ratio. To ensure that each variable receives at least 15 samples to consider, the recommended ratio of 15:1 was used in the study. As a result, a sample size of 135 was needed because this study comprised a total of nine variables (9). The variables that were used in this study (Contract compliance with condition, Contract documentation, and Contract monitoring) are latent variables that studied directly. Therefore, the metrics that

used in this study adopted from the earlier studies.

Analytical Model

The qualitative approach was used through the conduction of interviews so as to get better understanding and extra information of the subject matter for results triangulation, whereby content analysis was employed on qualitative data analysis. In quantitative approach, the model of multiple linear regressions was used to examine the data and the relationship between dependent variable and the independent variable. In this study, descriptive statistics were employed for analysis, display of respondent characteristics analysis. The effectiveness of non-consultancy services was assessed using the inferential statistic for all objectives as well. The performance of non-consultancy services was the dependent variable, and it was quantitatively examined in this instance using the multiple linear regression models.

The model for the multiple linear regressions was expressed under the following equation as follow:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Whereby;

Y = is the dependent variable (performance of non-consultancy services) β_0 = is the constant figure estimated in the regression model

β_1 , β_2 , β_3 and β_4 coefficient to be estimated by the model

X_1 = Communication

X_2 = Payment of Service

X_3 = Regular programmatic reports

Results and Discussion

Participant Characteristics

The study demonstrated the different characteristics of the participants involved in this paper which include gender, working experience and education level. This paper involved men made up 63.8% of the study participants, and women made up the remaining 36.2%, according to data from Table 1. This indicates that even though gender equality was considered when gathering the data, the results offered and addressed in this study mostly

came from male respondents. In aspect of working experience, the paper shows that 14.6% of respondents had experience of less than five years, 40.0% had experience of six to ten years, 21.5% had experience of eleven to fifteen years, 13.8% had experience of sixteen to twenty years, and 10.0% had experience of more than twenty years. Paper confirms that 85.3% of respondents had more than five years of work experience, according to the statistics, making them qualified to give important details concerning procurement contract management. The study was also curious about the respondents' educational backgrounds. In accordance with paper, 20.0% of respondents have a master's degree, 37.7% have a diploma, and 42.3% have a bachelor's degree. In accordance with the findings, 62.3% of respondents had a bachelor's or master's degree, demonstrating that they possessed the required awareness to acknowledge and respond to the questionnaire on various areas of procurement contract management. See Table 1;

Table 1: Participants Characteristics

Gender	Frequency	Percent
Male	83	63.8
Female	47	36.2
Total	130	100.0
Working experiences	Frequency	Percent
Less than 5 years	19	14.6
6-10 years	52	40.0
11-15 years	28	21.5
16-20 years	18	13.8
More than 20 years	13	10.0
Total	130	100.0
Educations level	Frequency	Percent
Diploma	49	37.7
First degree	55	42.3
Master degree	26	20.0

Gender	Frequency	Percent
Male	83	63.8
Female	47	36.2
Total	130	100.0

Sources: Field Data (2022)

Inferential Statistics

This section was completed in order to determine the relationship between the independent and dependent variables. The primary goal of this study was to assess how well higher learning institutions provided non-consulting services in relation to the procurement contract management. On a scale of 1 to 5, non-consulting services were analyzed based on three independent criteria: contract condition compliance, contract documentation, and contract monitoring. The three independent variables (predictors) each have distinct characteristics or sub-variables. The statistical relationship between the predictors and the dependent variable was established using regression analysis.

Effects of Contract monitoring on the Performance of Non-Consultancy Services

The greatest beta coefficient value of 0.587, or 58.7% found in table 4 is connected to payment for satisfactory performance. This shows that the performance of non-consultancy services, the dependent variable, can be explained by pay tied to good performance in a distinctive, somewhat significant way, since the P-value is less than 5% (0.05), which is 0.000, the link is statistically significant. Furthermore, regression analysis demonstrates that other independent variables (communicating and regular programmatic report) positively influence understanding of the dependent variable, which is the performance of non-consultancy services, and this relationship is statistically significant because P-values are below 0.05 for communicating (communicating=0.585, P-value=0.000), exception of regular programmatic report, which was not significant at above 5% (Beta=0.141, P value=0.070).

Table 2 Regression Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients		T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.168	.940		2.307	.023
Communicating	.585	.084	.469	6.938	.000
Regular programmatic report	.141	.077	.114	1.830	.070
Payment	.587	.067	.438	8.807	.000

a. Dependent Variable: Non consultancy services performance

Source: Field Data (2022)

The regression study's findings indicate that if all variables including communication, regular programmatic reporting, and payment were held constant, the performance of non-consultancy services would be 2.358. A unit increase in communicating resulted in a 58.5% increase in performance for non-consultancy services, a unit increase in payment linked to satisfactory work produced a 58.7% increase in performance for non-consultancy services, and a unit increase in regular programmatic report produced a 14.1% increase in performance for non-consultancy services. According to the findings, the impact of communication and payment on the performance of non-consultancy services was significant at less than 5%. However, the report for regular programming was insignificant at 5% and above. According to the findings, higher learning institutions' excellent communication, regular programming reporting, and payment practices lead to superior non-consultancy services performance.

The findings indicated that higher learning institutions' excellent communication, regular programming reporting, and payment practices lead to superior non-consultancy services performance. The findings demonstrate that contract monitoring has a beneficial impact on non-consultancy services performance with regard to these three aspects: communication, regular programmatic report, and payment. The findings are consistent with Norm (2013), who emphasized that the significance of contract monitoring is to ensure that the service provider correctly carries out the provided service. The institution is largely in charge of

deciding what kind and how much monitoring are conducted. A business can reduce the risks involved with outsourcing services by developing effective contract monitoring. The corporation should take the intricacy of the contractual service, the contract's worth, and the possibility of subpar work performance into account when deciding which components are necessary.

The results made clear that communication has a significant impact on non-consulting service performance. This is because a thorough definition of requirements was created and there was clear communication with the service provider. This suggests that the best approach for an organization to convey its expectations to a service provider or potential service provider is through a comprehensive statement of needs. The contract and/or request for proposals both make reference to it (RFP or RFQ). The findings are supported by Alex (2021) who asserted that the requirements statement must be succinct, direct, understandable, and rational. The contract's purpose or goal, the contract's specifications, performance metrics, performance targets, the institution's performance evaluation processes, and any additional expectations for the service provider should all be included in the statement of requirements. Public organizations must find a balance between safeguarding the institution's interests and promoting the service provider's creativity throughout the preparation of the proposal and the execution of the contract while creating the statement of requirements.

In a face-to-face interview, one of the respondents stated that:

When formulating the statement of requirements, care was made to strike a balance between protecting the institution's interests and fostering service provider innovation throughout the formulation of proposals and contract fulfillment. (Key informant 1, 2022)

Addition during the interview, another respondent explains that:

The contract's purpose or objective, contract requirements, performance measurements, and goals, as well as the institution's procedures for evaluating the service provider's performance, should all be specified in the statement of requirements. Additionally, the need statement must be clear, succinct, unambiguous, understandable, and rational. (Key informant 2, 2022)

The information provided also backed up the idea that payment was conditional on proper performance in accordance with the contract's monitoring of non-consulting services. This is because the business shouldn't pay the service provider unless it has some confirmation that they are complying with the contract in a sufficient manner. The company should ensure that the service provider complies with all quality, quantity, and timeliness requirements in the contract. The results are in line with Kerie's (2018) research, which claims that staff members have a responsibility to defend the company's interests and that, in certain circumstances, it might be essential to ban payments from the service provider. Contracts with public institutions require them to pay monthly or quarterly, and the institution expects the service provider to submit programmatic reports beforehand or in accordance with its billing. Program reporting is directly related to contract terms. If the required reports are not submitted on time and in full as per this agreement, the service provider may postpone payment of the invoice.

In a face-to-face interview, one of the respondents revealed that:

The institution needs a service provider to submit programming reports before or concurrently with its bills in contracts involving monthly or quarterly payments. The contract terms are closely related to the programming reporting. In the event that all necessary reporting is not submitted on time and in full, this arrangement enables the service provider to delay payment of the invoice (Key informant 3, 2022)

The outcomes further backed up the link between regular programming reporting and strong performance in terms of contract monitoring for non-consultancy services. This is due to the fact that the organization can effectively assess whether the service provider is delivering adequate contract services using the service provider's periodic software reports. The results were confirmed by Alex's (2021) research, which claimed that failing to routinely evaluate service providers' performance may cause problems to continue and may convey to service providers that performing below expectations is acceptable. The service provider is required by the contract to routinely produce specified programming data in order to evaluate whether performance objectives are being met. The outcomes and results of the contract, as well as any additional deliverables, must be included in programmatic reports. The findings also demonstrate that Dodoma's higher learning institutions can effectively assess whether the

service providers deliver the required contractual services by consulting the reports from the service providers. Service providers must generate monthly or quarterly reports that allow institutions to quickly detect and address any issues current or potential and take appropriate action. Furthermore, failing to periodically assess service providers' performance could result in problems continuing and convey to service providers that providing inadequate service is acceptable.

...One of the respondents said in a face-to-face interview that their contract with the service provider needs the service provider to regularly produce specific programming information in order to determine whether or not performance measures are being met. The contract's performance indicators (outputs and outcomes), as well as any other deliverables must be disclosed in programmatic reports... (Key informant 4, 2022)

Conclusion, and Recommendation

After taking into account the findings from quantitative and qualitative research, a clear understanding of the connection between the performance of non-consultancy services and contract monitoring is provided. The conclusion is that increased contract monitoring improves non-consultancy service performance in higher learning institutions. According to the study, regular programmatic reporting from service providers, contract monitoring based on communication, and compensation linked to good performance all had a positive relationship with the performance of non-consultancy services. This implies that in any higher learning institution or public entities, for the better performance of non-consultancy service must enhance closely contract monitoring in the effective procurement contract management.

Furthermore, this paper recommended that the procuring entity should train the employees who are in charge of monitoring contracts since this increases the possibility that they will do so accurately by providing them with the necessary background information. It was also recommended that to contracts that demand payments be made monthly or quarterly, either in advance of or concurrent with the service provider's billing, they should also demand that the service provider give programming reports. Program reports should be directly relevant to the contract's provisions.

Acknowledgments

This paper gives acknowledgements those who assist the author to complete this study successfully. The author expresses her sincere gratitude to her sponsor, College of Business Education, for helping to pay for her studies, and passing her gratitude to Dr Nasibu Mramba for his guidance, encouragement, and helpful criticism, as well as for his commitment to this task despite short deadlines. His career and mentoring have significantly motivated the author.

Furthermore, the author wants to express her gratitude to the management teams at each of the selected higher learning institutions (University of Dodoma, St. John University, and Institute of Rural Development Planning, and to all of their staff members for agreeing to take part in the questionnaire and interviews. They provided material that undoubtedly helped to complete this article.

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Force Account Method Usage and Procurement Process Compliance in Secondary School Construction Projects in Tanzania

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Abstract

Force account procurement method usage by public entities is very essential in improving the performance of Local Government Authorities' construction projects as it reduces the costs of various projects through effective and efficient utilization of resources. Despite the benefits obtained from the use of force accounts by procuring entities still, there are challenges facing its implementation in terms of value for money. The study guided by Resource-based Theory. A Cross-sectional survey design employed. Simple random sampling used to select a sample of 116 secondary schools using force account as the method of procurement. Primary data was collected using administered structured questionnaire and interview guide, while secondary data collected through a documentary review. Quantitative data were analyzed using descriptive statistics to compute percentages means of respondents. Inferential statistics analysis carried out using Multiple Regression. Thematic analysis adopted for qualitative data analysis using NVivo. The findings show that force accounting usage has a positive significant effect on procurement process compliance. The challenges facing secondary schools using force account in construction include lack of qualified personnel to manage such projects, failure in achieving the intended quality, delay in delivery of item, human resource inexperience to run and manage huge construction projects, ineffective record keeping, poor supervision and top management interference. Therefore, the study recommends that capacity building training to be provided to all force account users, there

should be a maximum threshold amount for force account usage, close supervision of force account projects is very essential, competent managers, project implementation teams, or supervisors must be selected based on profession, expertise, and experience in a particular type of project. Procuring Entities to enforce professionalism and ethical practices in procurement projects and ensure all procurement standards such as inspection of ordered items, record keeping are adhered as per the procurement governing law and guidelines.

Key words: force account, local government authorities, value for money, compliance

Introduction

Organizations globally, strive to ensure minimization of costs while improving quality in construction projects using various methods of procurement including force account (FAM) (France, 2019). Proper selection of the method of procurement helps to avoid problems related to time and cost to achieve the project specified goals (Ramasamy et al., 2017).

Cost overrun in construction projects is a challenge facing developing countries than developed countries caused by lack of financial resources, staff training in the skill area relevant to the project, risk management strategies, poor site management, and supervision. Others include contractors and consultant tendering faults, political instability, poor contract management, environmental, social-political instability, and procurement management factors, financing and payments of completed projects, lack of materials and equipment due to poor inventory control (Almaktari et al., 2017).

According to Public Procurement Regulations Act [PPR] (2013), there are various methods of procurement including tendering, shopping, direct contracting, force account, community participation as well as public-private partnerships. Force account plays a very important role, as it may be applicable in works that are scattered or are in remote locations for which qualified construction firms are unlikely to tender at reasonable prices, work is required to be carried out without disrupting ongoing operations. risks of unavoidable work interruption are better borne by a procuring entity or public authority than by a private contractor, there are emergencies which require prompt attention, the procuring entity has qualified personnel to carry out and supervise the required works and the maintenance or construction is part of the routine activity of the procuring entity (PPRA, 2020).

The use of force account increases greater opportunity for government to yield benefits in terms of cost, quality, staff capacity building, internal confidentiality, and security assurance. In addition, The Public Procurement Regulations Act, (2013) requires procurement entities to follow public procurement principles including provision of equality of opportunity to all tenderers in competitive tendering; fairness of treatment to all parties; and the need to obtain the best value for money in terms of price, quality and delivery having regard to set specifications and criteria.

Despite the benefit of force account Mbabazi and Mugurusi (2018) revealed that, lack of adequate and reliable equipment due to breaks down and the cost of hiring equipment lead to delays in the execution of works. Also, lack of skilled professional personnel, inadequate training on the implementation of the force account method to key stakeholders such as political leaders, accounting officers, procurement staff and district engineers that lead to poorly maintained equipment.

In addition, irregularities in contract management and accountabilities, lack of enough funds, lack of competitions as procurement manager procured materials direct from suppliers. Also, (Tekka, 2019) found that FAM depends on training to acquire professionalism, supply chain involving inventory control, project committee and government support for effective and efficient performance. In addition, effective application of FAM depend on supervising consultancy, collaboration with procuring entity and executing team based on well detailed documents prepared before and after renovation during implementation of this methods (Shengeza, 2018).

The use of Force Account approach for executing public works in Tanzania existed since Financial year 2016/2017 where the government has put more emphasis on the use of Force Account approach in the construction and rehabilitation of public infrastructure such as schools, hospitals, colleges and public offices (United Republic of Tanzania [URT], 2021).

PPRA (2019) revealed that, some of procurement through force account implemented at schools had challenges such as the tender document missed necessary information relating to the tender, the evaluation criteria provided in the tender document were ambiguous, procurement management unit and tender board were not involved in the procurement process from the beginning of the project to the completion. Other, are document missed

necessary information relating to the tender, and the evaluation criteria provided in the tender document were ambiguous. Also, the procedures provided by Reg. 131 (4) (b) and 5 of Public Procurement Regulations [PPR] (2013) were not followed, and PEs were not conducting mini competition on prices of building materials from at least three suppliers with framework, lack of inspection reports of works, weaknesses on contract management, and quality control.

Statement of the Problem

Force account procurement method is the appropriate method used in construction projects in local government authorities as it reduces costs and time of completion of various projects and facilities to attain the best value for money for the country (France, 2019).

Knowing the importance of force account, the government emphasize on the use of force account in the construction such as of schools and hospitals to improve service delivery to Tanzanian. The ministry of Education science, Technology and Vocational Training (MoEST) spent Tzs 800 million to 1 billion in construction of staff quarters, class rooms, laboratories, dormitories (MoEST,2017)..

Despite the benefits obtained from the use of force account by procuring entities, the CAG report 2020/2021 revealed a number of challenges including questionable competition for TZS 2,134,305,510, loss of TZS 100,156,000 due to abnormal prices as items bought at higher price as compared to normal market prices. Other challenges are improper recording of stores, goods worth TZS 48,759,215 were either not inspected and accepted at all or inspected, inadequate technical specifications in the Material Schedule (BoQ). Other challenges include delays in completion of projects, inadequate quality control, and shortage of qualified personnel capable of supervising construction through Force Account. Thus, value for money will not be achieved during implementation of construction projects in the education sector (URT, 2021).

Little is known on the effect of force account method on procurement process compliance. Thus, the present study seeks to investigate the effect of force account implementation in the selected secondary school construction projects in Mwanza region for improvement of construction projects procurement process in Tanzania to achieve value for money. Objectives of the Study

General Objectives: To investigate the effects of Force Account method usage on the procurement process compliance in Mwanza secondary school construction projects.

Specific Objectives

- 1) Identifying the challenges faced by Mwanza government secondary schools in implementing force account method in construction projects.
- 2) Identifying the benefits ahead of the use of force account method in government secondary school construction projects in Mwanza.
- 3) Examine the effects of force account method on compliance with procurement process in Mwanza secondary schools construction projects.

Research Questions

- 1) What are the challenges faced by Mwanza government secondary schools construction projects in implementing the force account method?
- 2) What are the future opportunities from the use of force account method in Mwanza secondary school construction projects?

Research Hypothesis

Force account method usage has no effects on procurement process compliance in Mwanza region government secondary school construction projects.

Rationale of the Study

The study serve as an assessment of force account usage in Tanzania and as a performance review of the implemented force account projects under the Ministry of Education, Science and Technology (MOEST) and President's Office - Regional Administration and Local Government (PO – RALG) as it will have noteworthy implication to the development of construction project across the country.

The findings revealed areas of administration of force account method that requires improvement and suggest possible remedies to different actors responsible for public procurement management.

Conceptual Definition of terms

Force account

According to PPR (2013) as amended in 2016 that governs procurement activities in Tanzania defines FA as a construction by the procuring entity itself or use of public or semi-public agencies or departments concerned, where procuring entity or the public or semi-public agency uses its own personnel and equipment or hired labour.

Theoretical Framework

The proposed study will be guided by the Resource Based Theory (RBT) whereby According to (Barney, 1991) firm resources include all physical resources, human resources, information resources, organizational processes, and even organizational capital resources (internal and external relations) that can be leveraged by a firm for competitive advantage.

This theory describe how organizations can exploit their resources both internal and external resources, and capabilities to achieve a sustainable competitive advantage. It further states, the exploitation of these key resources and capability to the best use led to performance growth of the organization in terms of cost minimization, profit generation, efficiency in operations and competitive advantage.

The establishment of force account usage in Tanzania is a narration of the resource-based theory implementation. Force Account method requires procuring entities to have human resources with capacity and experience to enable compliance with the Law and regulations of public procurement, equipment or hired labour. Therefore, theory and its assumption will guide the assessment of force account usage in the Local Government Authorities' performance in terms of having qualified and competent personnel, cost minimization, quality and timely completion of projects to achieve value for money.

Empirical Literature Review

Public sector are required to use force account method of procurement for various construction projects to ensure value for money is achieved in spending scarce resources (France, 2019).

Force account method cause the economic empowerment of local skilled labors and hence causing great changes to their life as a result of capital increase and knowledge gain in terms of financial management, procurement procedures, health and safety, contract management as well as human resource management (Tekka, 2017).

The adoption of force account mechanism in road maintenance works procurement in Uganda was unsatisfying (Mbabazi & Mugurusi, 2018). Among the listed reasons behind the unsatisfactory performance includes; irregularities in the procurement of the inputs used for force amount mechanism, delays in executing the works, irregularities in contract management and insufficient accountabilities for force account activities. To counter the unsatisfactory performance, the study recommended that the practiced policies and guidelines needs review, training of key involved stakeholder on the implementation force account projects is inevitable so as the government can save money when using this procurement mechanism.

Force Account method implementation in Tanzania is directed by Public Procurement Act No.12 of 2011 (URT, 2011) (as amended, 2016) and Public Procurement Regulation GN. 446 of 2013 (As amended, 2016) (PPR, 2013). Policies and legal framework work together with guidelines issued by Ministry of Education Science and Technology (MoEST), President Office Regional Administration and Local Government Authority (PO RALG) and Public Procurement Regulatory Authority (PPRA) all together help to enforce an effective application of Force account method.

Despite all these policies and legal framework on the execution of force account projects, the force account method was inadequately monitored, and evaluated by Public Procurement Policy Division (PPPD) as expected (CAG, 2021). There were no monitoring and evaluation mechanism, procedures and strategies at PPPD regarding the force account projects, no monitoring and evaluation annual plan at PPPD and specific budget allocated for such activities was lacking. The like shortfall was in the monitoring and evaluation of material management, as no monitoring and evaluation conducted, lack of verification reports of materials management and lack of circular during execution of projects through Force Account. As a result of this free execution, the implemented Force account projects were characterized by, questionable competition, price abnormalities, improper management of

materials, inadequate and incompetent personnel to supervise the works (URT, 2021). Many of projects are questionable, not completed and the achievement of value for money jeopardized, mostly in the construction projects of Public education sector.

The listed pitfalls observed on the application of force account as a method of procurement for renovation and remodeling of government building projects in Tanzania includes lack of competence of the participants in applying for force account for renovation of government buildings, supervisors of the force account renovation projects had no basic skills required to execute such projects (Shengeza, 2018). The study recommended the use of skilled supervising consultancy as a way to counter the capacity insufficient of the project supervisors. Similarly, Mchopa (2020) Findings indicated that the poor performance were attributed by the absence of a standardized force account guideline applicable throughout the country by the respective procuring entities; the legal provisions on force account are insufficient for the sake of enforcing best practices. The study recommend that regulatory authorities should ensure that the newly introduced force account guidelines are enforced accordingly so as to improve effectiveness and efficiency, there is a need for continued rigorous trainings on force account undertakings among stakeholders involved in order to continue improving practices and performance.

Martha and Rehema (2022) revealed that the three aspects of value for money namely: Time, Cost and Quality are not well balanced for the best attainment of value for money in force account projects in Tanzania as most of these projects puts more emphasis on costs alone without considering time and quality control. (Matto, 2021) identified six general latent shortcomings and twenty-one detailed latent shortcomings of force account method usage including inadequate planning and designing of the project, inappropriate adhering to the procurement procedures for materials. Others include, inadequate contract supervision, lack of qualified personnel to execute and supervise the works, lack of appropriate equipment and tools, improper recording of cost of materials, labour, and overheads in the books of accounts.

Mollel & Maziku (2021) study concluded that the delay of performance of public building work contracts under force account resulted from insufficient allocated budget. Therefore, the study recommended that the Ministry of Finance and Planning and Presidents Office -

Regional Administration and Local Government Authorities to allocate and release sufficient funds to the

Conceptual Framework

Force Account Usage

Procurement Process Compliance



Method

Research Approach

Mixed approach guided the study execution throughout, as both qualitative data and quantitative data were involved and their respective data analysis techniques thereafter. This approach enabled a reliable understanding of the quantitative results while merging with the qualitative findings, which mostly reflect the respondents' point of view, experience and perspectives.

Research Design

The current study adopted Convergent/concurrent parallel mixed method design as quantitative and qualitative data collected at almost the same time, data analyzed separately, and results integrated during interpretation. This enabled to assess the prevalence of all factors studied while revealing multiple outcomes of the studied variables (Kothari & Garg, 2014).

Study Area, Population, Sample, Sampling Procedures

Study Area

The study area was Mwanza Region. The rationale for selection of the study area is due to existence of number of secondary school construction projects implemented by the use of force account method of procurement. Moreover, the region receive funds from central government with directives to use force account in implementing some projects. Therefore, relevant data for the study will be available from procuring entities.

Population of the Study

The population for this study refers to all the government secondary schools in Mwanza using Force Account method of procurement. Statistics show that there are about 164 government secondary schools in Mwanza region (URT, 2021).

Sampling Unit

A unit of analysis is referred to as the items that are observed, measured, or collected for sampling, and from whom the questionnaire will be filled in collecting relevant data (Cresswell, 2009). In this study, secondary schools were the unit of analysis and headmasters or headmistress were the unit of inquiry that participated in the study as they have extensive knowledge of their organization's goals and culture, and they make important decisions on issues relating to their participation in force account projects. The selection of key informants depended on their formal positions in the organization, knowledge of the core issues of the study, and their willingness to participate. Interviews was terminated when it was considered that the saturation point was reached and no new information is anticipated (Patton, 2002).

Sampling Technique

The current study used both probability and non-probability sampling techniques to obtain a sample from the target population. Tashakkori and Teddlie (2008) suggested that the selection of a sample to represent the whole population is of most importance as it is not practical to include all the members of the targeted population in a study as time, money and other resources are the limiting factors. Adequate sample size enables to generalize from a random sample and avoid sampling errors or biases (Taherdoost, 2017).

Kothari and Garg (2014) suggested the use of a formula to determine the sample size as it is capable of providing a mathematical solution by specifying the precision of estimation required and then compute the sample size.

The sample size was obtained by using the formula provided by Yamane (1967) for calculating sample size with a confidence level of 95% which was assumed in the current study as the level of confidence. The formula is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

where N - will represent the population.

Where in the current study; N - the population size = 164,

e -The level of precision (margin of error limit) = 0.05,

n - The sample size of tour operators.

Therefore, from the list of 164 schools, the formula provided a sample size of 116 schools.

Proportionate stratified sampling will be employed which is a stratified random sampling with a uniform proportion of items drawn from each homogeneous group (Rubin & Babbie, 2008). Thus, in proportional stratified sampling, the population was divided into six strata, and samples were selected by stratum in proportion to the strata sizes see table 1. Proportionate stratification used the sampling fraction for each stratum obtained by taking the size of the sample stratum divided by the size of the population. The schools selected by using simple random sampling from each stratum.

Table 1: Proportionate Stratified Sampling

District	Secondary School ratio	Proportionate Sample size
Magu	19/164	13

Mwanza Jiji	30/164	21
Ilemela	25/164	18
Kwimba	32/164	23
Sengerema	37/164	26
Ukerewe	21/164	15
Total Sample Size		116

Source: (URT, 2021)

Data Collection Techniques

The current study employed both primary and secondary data; primary data collected using administered structured questionnaire for quantitative data and interview guide for qualitative data collection, while secondary data collected through document review. The documentary review will involve a number of documents such as public procurement law and regulations, force account guidelines issued by ministries, public procurement regulatory authority (PPRA) and controller auditor general (CAG) audit reports, public procurement circulars and guidelines, conference and research paper.

Data Analysis

Quantitative data collected analyzed using both descriptive and inferential statistics. Descriptive statistics employed to compute percentages and means of respondents' responses while inferential statistics used in testing the hypotheses using the Multiple Regression analysis. Data collected through the documentary review obtained from the available official documents for public use. Qualitative data analyzed thematically via NVivo.

Results and Discussion

Challenges faced by Mwanza government secondary schools construction projects that are implemented by force account.

The first objective focused at identifying the challenges emerging from the use of force account method on constructions projects undertaken by government secondary schools in Mwanza region.

Table 3.2: Descriptive results of challenges of implementing projects by force account method.

Force account challenges	Mean	Std. Deviation
Inexperience of human resources involved	3.9286	0.8755
High cost of projects	2.2356	0.9843
Poor record keeping	3.9533	0.7384
Poor supervision	3.4531	0.8937
Top management interference	3.7584	0.6474
Escape competition	3.6785	0.9375
Non consideration of special groups	3.1372	0.6733
Quality issues	4.2352	0.2853
Ethical issues	3.6742	0.3383

Delay of items	4.0122	0.4323
Lack of qualified personnel to run the project	4.5751	0.3388

Source: (Study findings, 2022)

The descriptive results presented in table 3.1 above indicates that; there is lack of qualified personnel to manage such projects (mean score of 4.5751), since the construction projects in secondary schools are managed by head teachers who are not practically qualified to supervise such projects. Another challenge is failure in achieving the intended quality, which had 4.2352 mean score followed by delay of items with a mean score of 4.0122. Among the reasons for the quality issues and delays in delivery of item is the former challenge of supervision capability to the implemented force account. Other challenges include the human resource inexperience to run and manage huge construction projects, ineffective record keeping and poor supervision as the mean score reveals (3.9286, 3.9533 and 3.4531 respectively). In addition, top management interference identified as one challenge experienced especially on selecting service providers and vendors of the required materials and equipment by minimizing competition.

Other challenges include the non-involvement of the special group and ethical issues. Many force account project managers do not adhere to the procurement ethics as required since many of them are non-procurement professionals and as a result, the project is managed as an individual construction project. This was narrated by a respondent during an interview, who further gave the following statement;

“The problem is that it is implemented as if one is building his own private house”

However, the following challenges were expressed by interviewees during an interview:

“... when you argue on the procurement ethics you are being regarded as rigid and your aim is to slow down the project for your own benefit”

“....I suggest there should be a threshold for force account usage as it is very difficult to manage projects of very large amounts.”

“...politicians interfere the effective force account implementation”.

“Lack of training is among the very big problems we are facing...”

“We receive funds very late to pay for various costs e.g. suppliers, and technicians.

3.2: Benefits resulting from the force account construction projects implementation in Mwanza by government secondary schools.

Table 3.2: Benefits resulted from force Account method implementation

Benefits	Mean	Std. Deviation
Better prices of items and material	3.9765	1.12783
Capacity improvement of the involved staffs	3.6733	1.01832
Value for money achievement	4.6200	.78941
Timely completion	4.4867	1.98646
Flexibility in project management	3.4662	.91235

Source: (Study findings, 2022)

The establishment of the force account method in Tanzania aimed at lowering the costs of construction projects and improving time completion projects (Mbabazi & Mugurusi 2018). To affirm this objective, the study focused on revealing the opportunities that the government secondary schools can benefit from as shown in table 3.2. The most mentioned benefit from the implementation of force account is the achievement of value for money as the project is managed by the entities staffs who are highly motivated, trained and with experience. This opportunity scored a mean of 4.6200 followed by timely completion of the projects that scored 4.4867. The implementation of the force account method also leads to low costs of products, as the entity is able to benefit from the retail prices from the local markets of products rather than the former tender prices that are relatively high. The opportunity to

benefit from the local retail prices scored a mean score of 3.9765 followed by capacity building and improvement of the local staff that scored a mean of 3.6733 and a standard deviation of 1.01832. This imply that the entity’s human resource is utilized during force account projects implementation, as they are fully involved in the construction project from the primary stages until the finishing stage. Lastly, there is high chance of modifying and improving the implemented project as the entity has full power in implementing the project. This opportunity scored a mean value of 3.4662 and a standard deviation of 0.91235.

During the interview session, among the most mentioned factor is the timely completion of the project. A respondent argued that the timely completion of projects is highly influenced by the low level of bureaucracy and activities such as the inspection and certification of all the progress according to the phases specified. For instance, as observed during the interview one respondent commented that:

“..... because we do everything, it is very easy for us to manage time and ensure the project is completed within the specified time.....the construction of COVID-19 classrooms is one of the recent works that were completed within 5 weeks of construction a normal tender construction project could have cost more than 4 months to complete”.

3.3 The effect of force account on the compliance of procurement process

Table 3.3 Reliability test

Cronbach's Alpha	N of Items
.871	4

Source: (Study findings, 2022)

Linear regression employed to meet the objective of determining the effects of force account method on compliance of procurement process as implemented in government secondary schools. The findings preceded by the reliability test as shown in table 3.3 that revealed the used model was reliable as the Cronbach’s alpha value is 0.871.

Table 3.4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812 ^a	.729	.754	.18377

a. Predictors: (Constant) FORCE ACCOUNT

b. Dependent Variable: PROCUREMENT PROCESS COMPLIANCE

Source: (Study findings (2022))

The model summary from table 3.4 also reveals the goodness of fit of the used model as the R square of 0.729 shows 72.9% of variance of procurement process compliance explained by the independent variables. The model is statistical adequate as the ANOVA results from table 3.3 shows a significant value of 0.000 which is less than the sig value of 0.05. This reveals the model is a better predictor of the dependent variable.

Table 3.5 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.234	4	4.263	37.764	.000 ^b
	Residual	2.234	45	.235		
	Total	27.468	49			

a. Dependent Variable: PROCUREMENT_PROCESS_COMPLIANCE

b. Predictor: (Constant), FORCE_ACCOUNT

Table 3.6: The effects of force account on procurement process compliance

Variables	B	S.E.	Sig.	Exp(B)
Implementation of force account(index)	0.423	0.212	0.001	2.123
Experience (index)	0.374	0.134	0.099	2.754
Sex(dummy)	0.673	0.546	0.119	2.203
Age(years)	0.036	0.027	0.643	1.345
Education level (number)	0.194	0.045	0.540	1.621
Constant	-0.215	2.742	0.743	0.534
Omnibus test - Chi-square	53.342(6) (p=0.000)			

Dependent Variable: Procurement process compliance (increased = 1, otherwise =0)

Source; (Study findings, 2022)

From the findings in table 3.6, force account implementation has a sig value of 0.001 that is less than p-value of 0.05 and a regression coefficient of 0.423. This reveals that, force account method implementation has a significant impact on the procurement process compliance and a unit improvement on the force account implementation will improve compliance to the procurement process by 42.3%.

4.0 Conclusion, implications and the area for further Research

The study has identified several challenges that government secondary schools encounter as a result of implementing force account in construction projects in Tanzania. The challenges includes top management interference, ethical and quality issues, delay of items, inexperience

of the involved personnel, and increasing costs of project due to collaborations made in engaging other qualified personnel. These challenges are alarming the procurement regulating authorities in the country and each procuring entity need to improve the implementation and management of such projects. The study also revealed benefits that can be utilized from the effective applicability of force account method that includes; value for money achievement, timely completion of projects, low cost prices of items and the entire project at large, capacity improvement of the internal staff involved and flexibility in managing the project. Lastly, the study revealed a positive significant effect of force account method on the compliance of procurement process. Thus, the objective of introduction of force account method can be achieved when PEs comply with the procurement process as stipulated in the public procurement act and guidelines of force account. Furthermore, force account method implementation has a significant positive impact to the cost and timely completion of projects. This means, the implemented construction project by the use force account tend to incur reasonable low cost and timely completion compared to other projects compared by other methods. In addition, compliance of the method to quality standards is comparative insignificant.

From the above findings, the following recommendations are given towards various procurement stakeholders in the country for the need to improve the method implementation.

- i. The procurement governing authority (PPRA) should provide threshold amount for the use of force account method, as some unethical procurement practitioners tend to implement the method to costly projects, which in turn becomes difficult to manage.
- ii. The procuring entities should ensure the supervision of force account project is given full attention as a mean of improving the quality of these projects and correct the possibility of error and defects. These projects must meet the intended quality standards set to ensure value for money in the public sector procurement.
- iii. The procuring entities should provide training for capacity building to all force account users for effective and efficient management of the construction project.

- iv. Procuring entities need to enforce professionalism and ethical practices in procurement projects and ensure all procurement standards such as record keeping are adhered as per the procurement governing law and guidelines.

The suggested area for further investigation is on the investigation of the effects of force account usage on the procurement process compliance in health sector projects in Tanzania.

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Assessing the Implementation of East African Community Common Market Protocol on Free Movement of Tanzania Goods in East African Community

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Abstract

The study aimed to assess the implementation of the East African Community (EAC) Common Market Protocol (CMP) on free movement of Tanzania goods in EAC. It is important to study the implementation of CMP with regard to programs and policies that allow smooth movement of goods, because despite the adoption of the protocol for facilitating trade among the EAC partner states, yet there are obstacles in free movement of goods among partner state. This study employed a qualitative cross-sectional case study and purposive sampling with a sample of 30 respondents. Interview and documentary review were used to collection data. Qualitative data were analyzed using thematic analysis with Nvivo version 11 software. The findings revealed that, Tanzania succeeded in the implementation of the EAC CMP on free movement of Tanzania goods in EAC in terms of exportation of goods. However, denial of rules of origin certificate, long list of customs documentation requirements, limited testing and certification arrangements, quotas, embargoes and permit were found as the common non - tariff barriers that affect implementation of EAC CMP. Therefore, the study recommends that, Council of Ministers in the region consider and agree on the principle that non - tariff barriers which are inconsistent with the WTO rules have to be eliminated within the EAC. This study contributed to policy and body of knowledge regarding implementation of the EAC Common Market Protocol on free movement of Tanzania goods for the purpose of increasing Tanzania export and taking proper measure on removing of non-tariff barriers in East African Community.

Introduction

Among others, the East African Partner States in the Sixth EAC Development Strategy 2021/22 – 2025/26 wishes to increase trade development across the region. The EAC Development Strategy believe that the CMP which was signed in 2010 provide the framework which tend to remove restrictions among partner states and allow free movement of goods, free movement of persons, free movement of labour, right of establishment, right of

residence, free movement of service and free movement of capital. If the CMP is fully implemented by partner states will result to the economic growth and development among the partner states by creating value which lead to the increase in production and finally they will be able to create wealth through international trade.

The East African Community (EAC) is the inter- governmental regional organization of seven countries; Republics of Burundi, Democratic Republic of Congo, Kenya, Rwanda, Uganda, South Sudan and the United Republic of Tanzania (URT) with the aim of achieving common goals in economic, social and political integration (Secretariat, 2022). The EAC was re-established again after her initial collapse in 1977, through the Treaty that was signed on 30th November, 1999 and came into force on 7th July, 2000 by then three Partner States; the Republic of Kenya; the United Republic of Tanzania; and the Republic of Uganda. In 2007, Burundi and Rwanda acceded and South Sudan acceded in 2016 (Njuki, 2016). The newest Democratic Republic of Congo acceded on 8th April 2022 (EAC, Communique' on the signing of the Treaty of accession, 2022). The 42nd EAC Council of Ministers Report (2022) indicated that the EAC has a population of about 300 million with a combined GDP of US\$ 240 billion. According to Bainomugisha and Rwengabo (2016) pointed out that the East African Community is an example of a successful regional integration and also as one of Africa's fastest growing regional blocs.

Mwenedata & Bangayandusha (2016) pointed out that Article 5 of the EAC Treaty stipulates the objective of regional integration in developing programs and policies in order to widening and deepening regional cooperation in terms of political, social and cultural fields, economic, research and technology, defense, security and legal and judicial affairs.

The EAC Common Market Protocol (EAC CMP) was signed by the EAC Heads of State in November 2009 and entered into force on 1st July 2010 (Bainomugisha & Rwengabo, 2016). From the establishment agreement, the protocol was expected to be fully implemented by 2015. (Ugirashebuja, Ruhangisa, Ottervanger, & Cuyvers, 2017) pointed that Articles 76 (4) of the Treaty, establish the protocol as a second stage economic integration within the EAC after the customs union which was signed in 2005 with the aim of integrating partner states' markets into a single market; free movement of goods, persons and labor, services, capital, residency right of establishment.

In order to accomplish the objectives, set under common market protocol, partner states are responsible to recruit programs, policy and legal framework that will ensure the facilitation and implementation of CMP in the respective territory. The EAC CMP also provide obligation to partner states to domesticate the protocol into her domestic laws and develop policies which will support the implementation of the protocol (Njuki, 2016).

The East African Trade and investment report (2020) has highlighted that the economic performance of East Africa has been encouraging, the report shows that in 2020 Tanzania total trade increased marginally by 3.7 percent to US\$ 14,582.60 million recorded in 2020 from US\$ 14,058.44 million in 2019. This development was attributed to significant increase in merchandise exports coupled with decrease in imports during the year. For over five years from 2016 to 2020 Tanzania has an average export of 8,336.44 USD million and average import of 4,736.28 USD million worldwide. According to the EAC report (2020) Tanzania's total trade in 2020 with her EAC Partner States amounted to US\$1,136.9 million, higher than the US\$1,003.6 million recorded in 2019. Cumulatively, the country has been recording trade balance surpluses since 2016, reflecting increase in exports to other partner states. Most of the exports were destined to Kenya, followed by Rwanda, Uganda and Burundi. Low increasing, exports were destined to South Sudan, reflecting the need to enhance more trading relations.

According to EAC Trade and investment report 2020, Tanzania goods exports increased by 21.9 percent to US\$ 6,066.1 million, including exports of horticultural products, manufactured goods and gold. This is evidently that the regional integration has played a key role in sustaining Tanzania economic growth and reducing poverty, which align with the Tanzania Development Vision 2025 as well as the National Strategy for Growth and Reduction of Poverty (NSGRP). The increase in trade has encouraged increase in productivity and competitiveness within the region. The integration process offers substantial potential benefits for the United Republic of Tanzania (URT) including increased trade, investment, employment and income. However, not only does the process need to be managed effectively but, most importantly, Tanzania needs to put in place the necessary complementary and supporting measures to ensure the potential benefits of regional integration are achieved.

Ng'ingo (2019) pointed out that despite the increase of intra-trade among EAC partner states, the Common market protocol is partially implemented and this has resulted to trade restrictions among partner states which some of them who are signatories of the CMP have been launching trade disputed among others.

There are different views regarding the Tanzania status on the implementation of EAC common market protocol, especially on the free movement of goods in comparison with other EAC partner states. Ng'ingo (2019) study shows that Tanzania has not achieved much from what was anticipated under the EAC CMP largely pointing the lack of political will. Tanzania Invisible Barriers to Trade (2020) shows that Tanzania export has a potential to increase exports to the tune of \$2 billion per year, while now Tanzania export goods worth 1.34\$ billion, while a \$688 million is untapped export market for Tanzania goods due to trade challenges.

The effective implementation and domestication of the protocol depends on partner states' laws and framework of including the policies and regulations set to be adhered. If Partner States willingly want this protocol manifested, have got to make comprehensive policy reformation that their policies, laws and regulations align with their commitment to support the implementation (Njuki, 2016). Delaying the implementation of the CMP can result to Tanzania delay to reap the optimum trade benefits in goods.

As far as the movement of goods is concerned, Magani (2019) and Kinyua (2015) have carried out study to evaluate progress made so far of the protocol in Kenya; the study shows that some of the restrictions hindering the implementation of common market in EAC are non-tariff barriers, protectionist policies, inward-looking trade policies and redundant trading across border. For example, several disputes related to agro-processed commodities such as wheat flour, cereal crops, milk, cigarette and livestock have occurred due to mistrust among partner states and no resolution has been reached (Apell, 2019). Logically, each country is focusing on improving the external trade on its goods such as the agriculture products (Apell, 2019). It is, therefore, implicitly right to argue that the implementation of the EAC CMP is facing several challenges such obstacles to free movement of goods among the partner states.

The available studies (Ng'ingo, 2019; Atuza 2018; Njuki, 2016) concentrate on contributions of the EAC CMP in facilitating the labor movement and economic growth with respective to

Kenya and Tanzania. There remains a gap of empirical studies, particularly in Tanzania regarding the implementation of the common market protocol on free movement of goods. Therefore, this study intended to assess the implementation of EAC CMP movement of Tanzania goods in EAC.

Literature Review

Theoretical Review

The theory of absolute advantage by Adam Smith (1776) believed that international trade is viable when a country concentrate producing and exporting goods which are produced more efficiently than the importing county. Adams assumption on absolute advantage considered that every national has different ability in producing great number of products, services or goods when applying same amount of resources. Adams also has assumed that when other factors of production cannot move from one country to another as well as no barriers in trade in goods between the exporting nation and importing nation. The theory believed that when there is increase in production can result to the lowering production costs per units and hence can result to economies of scale over other country which produce the same at higher cost. The absolute advantage has positive results to exporters by earn more while the importing country will enjoy the goods which they cannot produce. Adam Smith also believed that international trade creates a trade expansion through division of labour and also is the result of multinational companies. That means, when a nation establish trade with another nation there is possibility for the nation who export to increase production which will need to increase labour in the production, because the international market is bigger than the domestic market. International trade is thus advantageous to a nation because it enhanced division of labour which turns to an increase of the exchangeable value of the annual produce of the land and labour of the country.

Despite of the assumption of Adams that no movement of factors of production such as labour and also did not account for the cost of transportation and border management which in this world all these are factors which determine the absolute advantages so should not being ignored.

The second theory adopted in this study was comparative advantage theory. According to David Ricardo (1817) comparative advantage theory principally believed that countries

should concentrate producing goods which have comparative cost advantage over others. Ricardo's assumption is that the comparative advantage can be attained only if countries remove protectionism where by resources would be expected to move away from high cost to low cost products and as a result productivity would rise. Protection is seen as interference in the free play of market forces. Ricardo's comparative advantage theory does not compare between the costs of production in money terms, as generally understood, in domestic and foreign markets, but rather between real costs (in terms of labour time and other resources) of different commodities at home. Redding (2004) concur to Adam Smith that innovation in technology which results to specialization can have absolute advantages over competitors who produce the same product in other country in terms of production cost per unit. Venables (2001) and Grossman & Helpman (1990) believed international trade and investment flows can be contributed by either through geographical position, technology, logistics, and communication infrastructure across borders. When a country win among this with exception to others can attain comparative advantages over others and as the time goes that nation or company can have absolute advantages over others.

The comparative advantage theory suggests that international trade can take place where there is specialization and low-cost advantage over the other country with assumption that no trade restriction is imposed. This theory is more relevant to this study and taking Tanzania as a case study in the EAC due to its geographical position which can create comparative advantage through cost effective due to its strategic allocation and the available resources. If the Tanzania can manage and streamline the use effectively comparative advantage as well as absolute advantage theories can help Tanzania to use cost effective model to increase production for domestic market and surplus to be exported, but if Tanzania can remain reluctant and concentrate on the issue of geographical and ignore other factors such as innovation, technology, infrastructure, the resources can shift from Tanzania to low-cost producer countries.

Empirical Review

Many studies concerning the CMP have been conducted in different parts of the World. Majority of these studies demonstrate that there is delaying on the implementation of treaty Bainomugisha & Rwengabo (2016) Njuki (2016); EAC Development Strategy, 2017; (Eurallyah, 2021). Among many others, these studies were conducted in Kenya, Tanzania and Namibia.

Findings of all of these studies show clearly that partner states need immediate effort on the implementation of what is stipulated in their treaty.

Ng'ingo (2019) examined the current progress made in the implementation and domestication of the Common Market Protocol on the free movement of labour in Tanzania. The aim was to assess the level to which the EAC common market protocol has facilitated towards bridge skill deficit in Tanzania. The descriptive research design was used with 112 respondents, sampled using unknown population formula, where 100 respondents were interviewed using a semi-structured questionnaire while 12 respondents regarded as key informative. Also, the researcher conducted desk review to examine records on current progress made in domesticating the protocol under study.

The findings indicated that two third of the respondents were doubting about the progress. The study further noted that Tanzania has not achieved much of what was anticipated under the EAC CMP largely pointing the lack of political will. Moreover, it indicates that the country has been located on a losing end since many foreigners are flooding into Tanzania to look for jobs in sectors like education where the skill gap is felt, where cadres are enough to serve. Further, the study found that a number of laws signed after the 2010 EAC CMP in place by Tanzania have been rendered inconsistent with the protocol. However, the protocol has highlighted more six pillars on free movement of goods, services, persons and labor, capital, rights of establishment and residency but the study examine only on labour.

Thu et al, (2015) assessed the Impact of ASEAN countries with Japan and China Free Trade Agreements with the aim of assessing whether the FTA can result to trade creation or deviation. The objective was examining the trade effects between signatories of AFTA as well as between ASEAN and two trading partners; China and Japan. The Gravity Model Approach was used with a sample of 10 ASEAN countries who signed bilaterals with 22 major trading member with FTA. Export panel data was extracted of four years; from 2000 – 2013. The study show that the ASEAN member states' GDP per capita of importers and income gap attained positive effects, means that the AFTAs promoting trade among members. Although the empirical findings reveal that distance has been a restrictive factor for trading among member states. Moreover, results indicate that there was positive and significant trade creation effects as a result of tariff elimination in AFTA. Through AFTA

member states has been successful in promoting bilateral trade among countries as well as catalysit with third party. Actual, AFTA have helped intra-ASEAN trade as well as ASEAN exports to the rest of the world with no trade diversion effects on imports. The findings on the trade between ASEAN and China and Japan FTAs has created negative trade diversion among ASEAN members as well as import and export to the rest of the world. This correlation can be explained by the nature that there has been a significant increase in trade between ASEAN and China, Japan since ACFTA and AJCEP came into effect. Therefore, there has been a trade diversion effect in terms of both ASEAN's exports and imports of AJCEP and ACFTA.

Njuki (2016) examined the contribution of the East African Community common market protocol to the economic grwoth of Kenya. The aim of the study was to assess the free movement of persons, free movement of capital, free movement of goods and services within Kenya, and how they contributed to the growth of Kenyan economy. The study use exploratory design with a sample size of 184 using a formula for stratified random techniques. and multiple linear regration model was used for analysis through SPSS for data test. The sample was normal distribution with constant variance with significance level of 0.05. The result show that movement of capital has negative on economic growth of Kenya owing to small capita inflow. In Kenya from EAC in relation to the big capital flow. The result also reveals that there is an implementation challenges which need immediate efforts by the EAC Member states.

Łapińska1 (2014) examined the factors of intra-industry trade between European Union countries and Poland in agricultural and food products. The study adopted longitudinal design with a 26 European Union member states using trade data between EU and Poland from 2002 - 2011. The study variables were GDP, geographical distance and language. The geographical distance was used to measure the influence on transport cost. The study revealed that the European Union has achieved positively in trading with Poland which has contributed with the EU economy through increase of GDP on both partners. The Poland intra trade turnover development is also stimulated by EU trade arrangement with highly contribution of language which Poland use at the same time is used with EU member states. The study revealed that when international trade is taking place among countries, each country has positive impacts in its economy.

After reviewing various studies from different sources, it is a clear that there are many studies related to Common market in Tanzania and East Africa at large. However, to my knowledge this problem was not addressed for instance Ng'ingo (2019), assessed the implementation of EAC common market protocol on free movement of labour in Tanzania. The research findings among others it indicates that Tanzania has been located on a losing end since many foreigners are flooding into Tanzania to look for jobs in sectors like education where the skill gap is felt, where cadres are enough to serve. However, the researcher focusses on free movement of labour and mostly on labour movements examined the legal challenge deeply. This study focuses the role of EAC Common market protocol in improving free movement of Tanzania goods in East African Community.

Conceptual framework defined as schematic presentation of ideas in a figure like structure, is used in research to sketch possible course of action or to present a preferred approach to an idea or thought (Ahuja, 2016). In this study the conceptual framework is constructed by three independent variables, which includes role of EAC common market protocol in improving free movement of goods, while dependent variable explained by coordination of free movement of goods

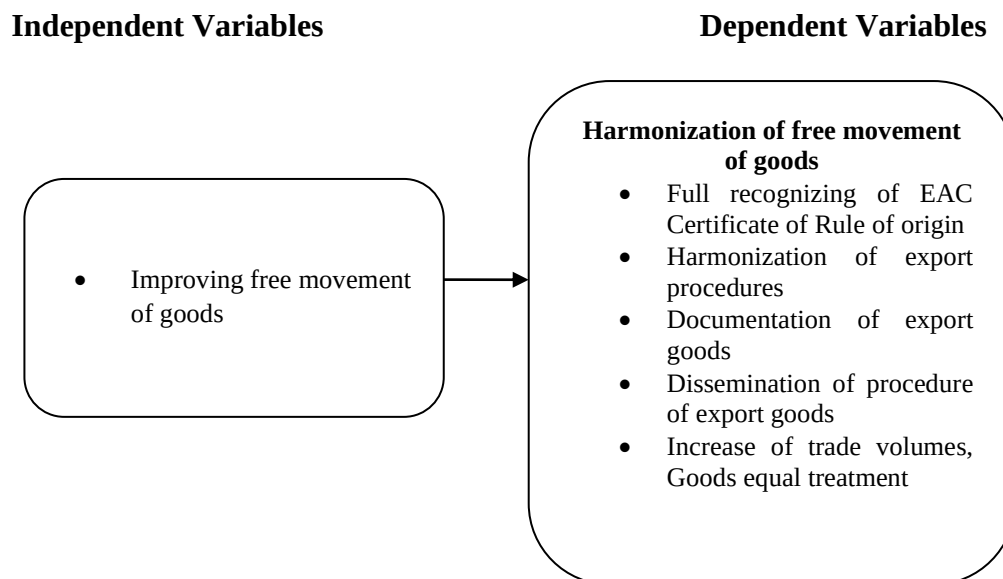


Figure 1: Conceptual Framework

Research and Methodology

A case study design was proposed in this research. Merriam (1985) and Kothari (2007) pointed out that the type of research design is very common in various fields of social sciences. The study was predominantly qualitative. The study established the extent by which the Tanzania goods has attained due to the existence of the free movement of goods pillar in the protocol. Thus, qualitative research approach, namely; interviews and documentary review were employed. The use of qualitative approach in studies like this was supported by Atieno (2009) who argued that the approach enables to collect detailed, in-depth and enough information from the field.

Asiamah, Mensah, & Abayie (2017) define target population as the entire group of individuals or objects to which the researcher is interested in generalizing conclusion of the target population. In this study, the target population will be Arusha, Dodoma and Dar es Salaam. This is because Arusha is the EAC Secretariat Headquarter, Dodoma is the Government Capital City where the Ministry of Investment, Industry and Trade (MIIT) is placed, and Dar es Salaam is the Tanzania Revenue Authority (TRA) headquarter and also it is the biggest business city in Tanzania with a large number of offices of Tanzanian Exporters and Importers.

In conducting this study, purposive sampling procedures were employed. The researchers aimed to use the purposive technique of non-probability sampling, which helped in selecting sample units that provide information on the study, specifically on the implementation status of the EAC CMP. The purpose of purposive sampling was supported by Merriam (1985), who argued that "the logic and power of purposive sampling lies in selecting information-rich cases for study in depth. Thus, the researcher purposefully selected respondents whom he knew, by virtue of their educational background and experience, would easily grasp the technical aspects of the topic, which would have been harder for a lay person. This method was used to select EAC secretariat officers, Ministry TRA officers, and exporters and importers to participate in the study.

In this study, interview and documentary review were used as the methods of data collection. The researcher adopted qualitative method for data collection. The study based on both the primary and secondary data. The secondary data consisting previous studies and reports

which helped to widespread a background and was used to increase general knowledge on the study which has helped to identify areas which had already been undertaken by former scholars in the preceding years.

In this study, data obtained through both interview and documentary review was analyzed thematically through three important stages. The stages involved assembling, coding and assigning. In the first stage, all the data obtained from each method were collected together. After that, the researcher grouped the data obtained from each method into different categories basing on their themes. Finally, data from each group obtained from each method were interpreted separately and proving results based on the literature and theories.

Findings and Discussion

The role of EAC CMP in improving free movement of Tanzania Goods to EAC

There were different perceptions on the question: What is the role of the EAC CMP in improving free movement of Tanzania goods in the EAC Partner States? Seven (23.3%) out of 30 respondents did not answer the question. 12 (40%) out of 30 respondents had the opinion that the adoption of the EAC CMP by member states has helped to increase the exports to Partner Sates than before as illustrated in the Table 1.

Table 1: Respondents view on the role of EAC CMP

No answer (%)	Unclear response (%)	Supportive responses (%)
23.3	36.7	40

One of the respondents belonging to the category of supportive responses (40%) said:

I believe that among others a first role of the East Africa Common Market Protocol is to help free circulation of goods between the Partner States, encourage fair and effective competition in order to provide consumers with greater choice among goods at the lowest cost and stabilize markets and ensure the availability of supplies for both domestic consumption and exports [...] (respondent No. 2).

Another third supportive respondent add that:

“...Primary intention of CMP is to widen and deepening cooperation among the EAC partner states aiming to increase exportation among EAC Countries...”.

The findings imply that, free movement of goods within the East African Community (EAC), and to provide for the establishment of a single market for the region. The Protocol aims to reduce trade barriers and promote the development of regional infrastructure, while also promoting economic integration among partner countries.

The findings in line with Aloo (2017) page 303 –310 on the book of East African Community Law noted that, the aim of the East African Common Market is to promote the free movement of goods between partner states, in order to boost trade and economic growth in the region. By reducing barriers to trade, the EAC CMP hopes to create a more competitive environment, which will in turn lead to increased export revenues for its members. Furthermore, the EAC CMP seeks to promote regional integration through the harmonization of trade policies, and to support the development of regional infrastructure. By facilitating the exchange of goods and services between East Africa's partner states, the EAC CMP is expected to create jobs and promote economic growth in the region.

Succession of EAC CMP on the exportation of Tanzania goods

The study also sought to determine whether the role of the EAC CMP protocol succeeded in implementing the exportation of Tanzania goods in the following aspects as explained below

Rule of origin

The study sought to understand on the role of rule of origin in exporting Tanzania goods.

The third respondent adds the following;

“...The rule of origin provides full utilization and use of established industries to promote efficiency in production and use of EAC materials...”

Other fourth respondents add that:

“...In order for a product to qualify for preferential treatment, it must originate in an EAC Partner State. This means that the product must be wholly obtained or produced in an EAC Partner State...”.

Another fifth respondent add the following

“...In order to be considered as wholly obtained or produced in an EAC Partner State, a product must be wholly obtained or produced in the same country as the final assembly location. This means that a product that is partly obtained or produced in an EAC Partner State and also assembled in another EAC Partner State cannot qualify for preferential treatment...”

The findings imply that, rule of origin is a principle that determines the country of origin of a product. It is used as a mechanism to promote trade and protect the interests of producers in different countries within East Africa partner state, resulted to promote free movement of goods.

The findings also supported by David Ricardo (1817) theory on the comparative advantages on countries to export the products which have comparative advantage. Also, the findings concur with the First Schedule of EAC rule of origin (2005) state that, the rule of origin is not specifically mentioned in the protocol. However, it is implicit in the text of the protocol and can be found in Articles 2 and 3. Article 2 provides that all goods traded between partner states must be produced in one of the partner states. This implies that products originating from another partner state must be produced in that state or in a region within that state. Article 3 provides that goods exported from one East African Community partner state must also be exported from within that state.

Harmonization of export procedures

The study sought to understand how the harmonization of export procedures had help to reduce the time and costs associated with exporting goods from one EAC country to another. Therefore, respondents were asked the role of harmonization of export procedures in exportation of goods. This was explained by the sixth respondents who add the following explanation

“...Harmonization of export procedures is important in exportation of goods because it establish a single window for export clearance in each EAC country. This allows businesses to submit a single application for export clearance in each EAC country, and track the progress of their application throughout the process...”

Furthermore, other seventh respondents add that:

“...Harmonization of export procedures well implemented since implementing common standards for export documentation. This ensures that all exported goods are correctly documented and comply with international trade rules...”

The study findings imply that, the EAC protocol sets out the objectives of harmonization and provides a framework for cooperation among partner states in export procedures. It provides for the establishment of a common export procedure, including customs and trade facilitation measures, and lays down minimum standards for the conduct of border crossings. This supported by Oucho (2013) argue that, partner states are required to cooperate with of export procedures. The protocol provides for the exchange of information and technical assistance between partner states, as well as cooperation among customs administrations during free movement of goods.

Documentation of export goods

Respondent were asked how the documentation of export goods implemented. This was explained by the seventh respondent who add the following explanation

“...The protocol specifies that all exporters must obtain an export permit from the relevant authorities in their country of origin or destination, as well as from the EAC customs authority. The permit will specify the type and quantity of goods being exported, as well as any restrictions or conditions that may apply...”

The study findings imply that, the protocol helped exporters to keep track of the required documentation for exporting their goods to partner states. It will also make it easier for importers to identify and verify the export status of goods.

Dissemination of procedure of export goods

Respondents were asked if the procedure of export goods is user friendly.

This was confirmed by eight respondent who argued that:

“...The procedure for exporting goods from the East African Community (EAC) is relatively simple. Although in most cases, exporters will need to obtain a license from the EAC Development Bank (EADB) in order to ship

goods out of the community. Other than that, the main requirement is that goods must meet the EAC's quality standards in order to be exported...”.

The findings supported by TCCIA (2020) which shows that there are many customs and administrative procedures required to be followed at the border points; these procedures accounted for 28.79 % of the total export process. Furthermore, the findings supported by East Africa Community Protocol highlighted that in the aspects of dissemination of procedure. The exporter must obtain an export license from the East African Community. Secondly, the exported products must meet all the required regulatory requirements of the East African Community. Thirdly, the exporter must lodge an export declaration with the East African Community authorities. Fourthly, the East African Community authorities will issue an export permit to the exporter. Lastly, the exporter must transport the exported products to the port/point of export in the East African Community (EAC, 2012).

Conclusion

The study concludes that the protocol succeeds in implementing the free movement of goods with respect to exportation of Tanzania goods through Rule of origin, harmonization of export procedures, and documentation of export goods and dissemination of procedure of export goods.

The study recommends various measures to be taken to improve the implementation of the EAC Common Market Protocol on free movement of goods in Tanzania. Firstly, the EAC partner states should be committed in harmonizing their customs procedures in order to increase the efficiency and reduce the costs of trade. Overall, these measures are aimed at facilitating trade and promoting the exportation of goods within the EAC region.

The knowledge gained obtained through the findings of this study will in inform the existing legal and policy framework that hinders the harmonization and implementation of the EAC CMP on free movement of goods. Secondly, the findings from this study also will contribute to knowledge about the economic integration of the East African region. It helped to

understand the benefits and challenges associated with the implementation of CMP on free movement of goods in relation to free movement of goods. This knowledge will be beneficial to researchers and others who are interested in this area of study.

The study recommends further study be undertaken on other common market protocol pillars. Also, further study can be done on free movement of goods by employed both quantitative and qualitative research approach. Moreover, there is need to conduct more research on the EAC CMP particularly on its economic growth of Tanzania. Hence, researchers need to focus more on the effects of the provisions of the EAC CMP that Tanzania have complied with and the impact of this on their economic growth.

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Determinants For Foreign Direct Investments in The Financial Sector in Tanzania

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Abstract

Attracting FDI is a very essential action in most of the developing and emerging economies. Investment environment must be favorable to attract as many foreign direct investors as possible. This study was conducted to assess the determinants of foreign direct investment into the financial sector in Tanzania. Specifically, the study used macroeconomic determinants that showed significance in most phenomenal cases of developing and emerging economies including exchange rate, inflation rate, economic growth and interest rate as of the literature. An Autoregressive Distributed Lags (ARDL) Model was employed on the time series data collected from the central Bank of Tanzania database spanning from 1995 – 2020. The study findings revealed that, exchange rate and inflation rate had a significant positive impact on FDI inflows in the long run which results into attracting foreign investors. But in the short run, none of the variables were significant in explaining the relationship studied. Therefore, exchange rate and inflation rate are the significant determinants for foreign direct investment in the financial sector in Tanzania. The study recommended to the Ministry of Finance and planning having a regular improvement on the macroeconomic policies and regulations or both monetary and fiscal policies that may influence the inflation rate. Furthermore, appropriate measures have to be taken in favor of Exchange rate stability which has for some decades been continuously depreciating.

Keywords: FDI, Financial sector, exchange rate, inflation rate, GDP growth rate, interest rate, ARDL

Introduction

Appropriate decision is very essential in any business undertakings. A proper investment decision backed up with evidences based on the latest situation of the economic sector in particular is of paramount importance. Foreign Direct investment (FDI) as form of controlling ownership of a business enterprise in one country by an entity based in another country, (Zakari, 2017) needs to be a result of proper and right decision. Foreign Direct Investment flows have increasingly become an important source in most developing economies in recent years (BOT, 2018). Recently, the studies on FDI have been increasing as FDI plays essential support in poverty alleviation and reduction for developed and developing countries. It significantly plays a great role in job opportunities creation, enhancement and promotion of the economic development and improving the living standards of the people in most third world countries (Ogunniyi & Igberi, 2014). Furthermore, BOT (2018) added that according to the World Investment Report 2018, over the past subsequence five years before 2018, global FDI flows declined by 23.4% from USD 1867.5 billion in 2016 to USD 1429.8 billion in 2017. Moreover, FDI flows in Africa declined as well by 21.5% to USD 41.8 billion in 2017 from 53.2 billion in 2016 whereby it declined across all regions of Africa including East Africa which experienced a 3.3% decline in FDI flows. The UNTAD (2019) World investment report 2019, reported that the global FDI flows continued to decline in 2018 as it fell by 13% for the third consecutive year although in Africa rose by 11% which was mainly attributed by significant increased investments in South Africa. Moreover, in 2019 world investment report as well, FDI flows in Africa fell by 10% to USD 45 billion (UNTAD, 2020). This shows that recently the FDI flows in the world economy has not been stable.

Similar to other developing countries, Tanzania has had a fluctuating FDI flows trend since her independence. Tanzania had a smooth trend in FDI inflows in the periods from 1970 to 1994, but right from 1995 the FDI inflows increased rapidly and sharply but associated with some downward sloping in different years as it is shown in the chart, Figure 1. A slightly rapid increase in 1995 was due to strong momentum in the country's economic reforms and WTO membership but a sharp increase from 1998 to 2013 resulted from the invigorated investment policy and Act of 1996 (UNIDO & TIC, 2014). As of the trend, Tanzania has ever enjoyed higher FDI flows in the years from 2010 to 2016 which has not experienced again in

the next financial years from 2016. The distribution of FDI inflows in different sectors in Tanzania has been not the same due to different factors. Some sectors have been receiving a very huge amount of FDI inflows.

The sectoral FDI inflows distribution in 2017 showed that it was concentrated mainly in accommodation and food, mining and quarrying, and finance and insurance with an aggregated average of 61.5% of total inflows (BOT, 2018). In the finance and insurance sector, the FDI inflows experienced a decrease from the years 2015 to 2017 although it was the leading sector in 2013 having USD million 752.2 (BOT, 2018). Also, NBS (2018; 2016) reported that, financial sector employees continued to earn the largest monthly average cash earnings than any other economic sector for a long time of which in economic view point suggests that the investments pay significantly but this truth poses the question that why the investment trend has recently not promising. But generally, the FDI inflows in the financial sector of Tanzania had been lagging in the history than other key sectors like mining and manufacturing (BOT, 2018) as shown in Figure 2, however the financial sector attracted more inflows than other any sector in 2013, this amount has not been experienced again in the subsequence years.

Several studies on the determinants of FDI included some of the combination of exchange rate, inflation rate, interest rate, growth rate, market openness, market size, natural resources endowments, infrastructural development as factors may that may influence FDI in the respective studied economies but in most of the scholarly works, factors like exchange rate, inflation rate, GDP growth rate and interest rate showed significance in most study phenomena like (Ayomitunde, *et al.*, 2020; Ahmed, 2021; Zakari, 2017; Ogunniyi & Igberi, 2014; Bwana & Tumaini, 2021). This concern called for this study to assess the determinants for Foreign Direct Investment in the financial sector in Tanzania by testing hypotheses that;

- i. **H₀:** The exchange rate does not significantly influence foreign direct investment inflows in the financial sector in Tanzania.
- ii. **H₀:** The Economic growth does not significantly influence foreign direct investment inflows in the financial sector in Tanzania.
- iii. **H₀:** Inflation rate has no significant effect on foreign direct investment inflows in the financial sector in Tanzania.

- iv. **H₀:** Interest rate has no significant effect on foreign direct investment inflows in the financial sector in Tanzania.

The trend of FDI inflows in Tanzania (National and some key sectorial levels)

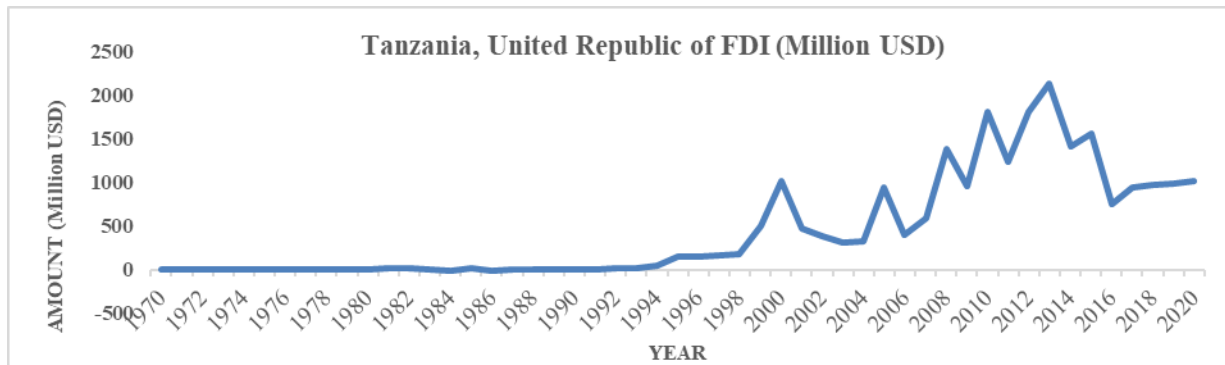


Figure 1: FDI Trend in Tanzania (1970 - 2020)

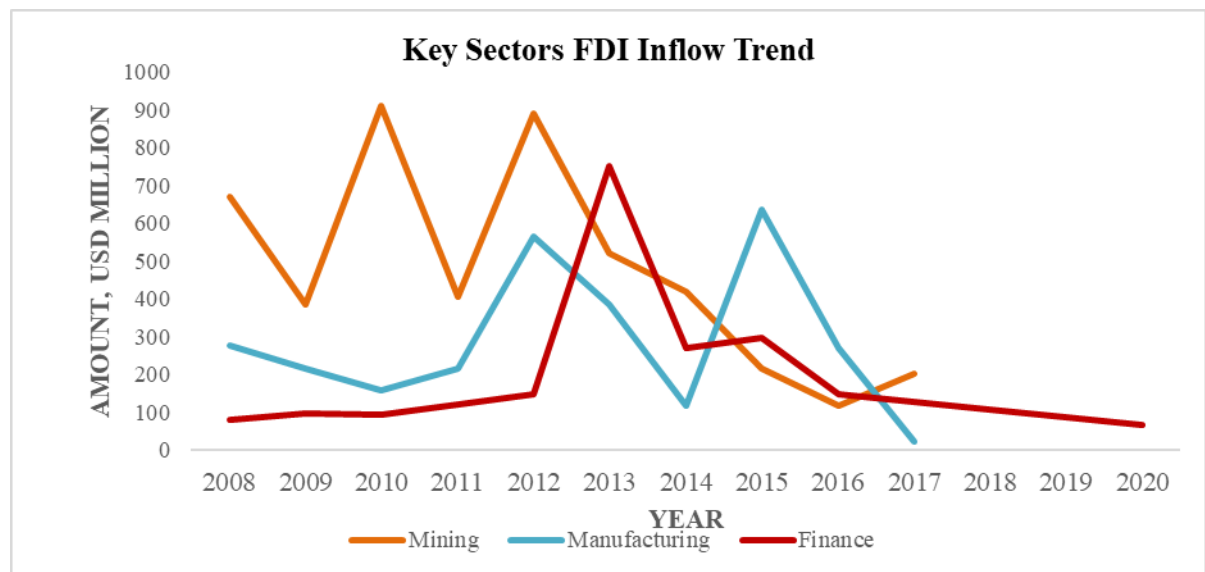


Figure 2: Comparison on the three key Sectors in the FDI Inflows in Tanzania (a 2008 – 2020 Snapshot)

Literature Review

A country with good and well improved investment climate specifically a favourable macroeconomic environment can enhance higher FDI inflows (URT, 2021). In explaining the

suitability of FDI environment, this study was grounded under the Institutional FDI Fitness theory which stipulates that FDI is determined by institutional variables based on the four institutions namely government, markets, education and socio-culture but basically on the two higher level institutions, the government (inflation and economic growth) and market (exchange rate and interest rate) (Wilhelms & Witter, 1998). Therefore, it is expected that a stable economy (with reasonable inflation) and promising economic growth rate and low interest rates as well as exchange rate in favour of foreign currency may attract more foreign investment.

Ayomitunde *et al.*, (2020) investigated the critical macroeconomic determinants of FDI inflows in Nigeria over the period spanning from 1990 to 2017 by employing exchange rate, growth rate, inflation rate and market size as determinants for FDI inflows. They found that past FDI inflows, market size, exchange rate and growth rate being positive and significant in influencing FDI inflows in Nigeria while inflation rate negatively affected and discouraged the FDI inflows.

Ahmed (2021) investigated the factors affecting FDI in Kenya by analyzing multivariate time series data from 1970 to 2020 where an ARDL model with a bound test for co-integration revealed that interest rate, growth domestic product (GDP), gross savings, trade openness had a positive and significant linking FDI while inflation and exchange rate had significantly negative relationship. The study further revealed that inflation and exchange rates discouraged foreign investment in Kenya. Another study in Kenya by Ogono, Obange and Odhiambo, (2017) on the overall determinants of FDI inflows with the observed data from 1970 to 2015 by using the correlation study design with a multiple time series regression models and found that the annual growth rate of GDP, inflation rates and external debt found to be significantly explaining the variation in the FDI inflows in Kenya, that is an increased rate of inflation resulted to more FDI inflows, also one percentage increase in the annual economic growth rate in Kenya attracted more FDI resulting to average increased FDI inflows.

A study by Shawa (2014) on the analysis of the major determinants of foreign direct in Tanzania found that market size, infrastructure development and natural resources availability were the significant major determinants of FDI inflows to Tanzania within the

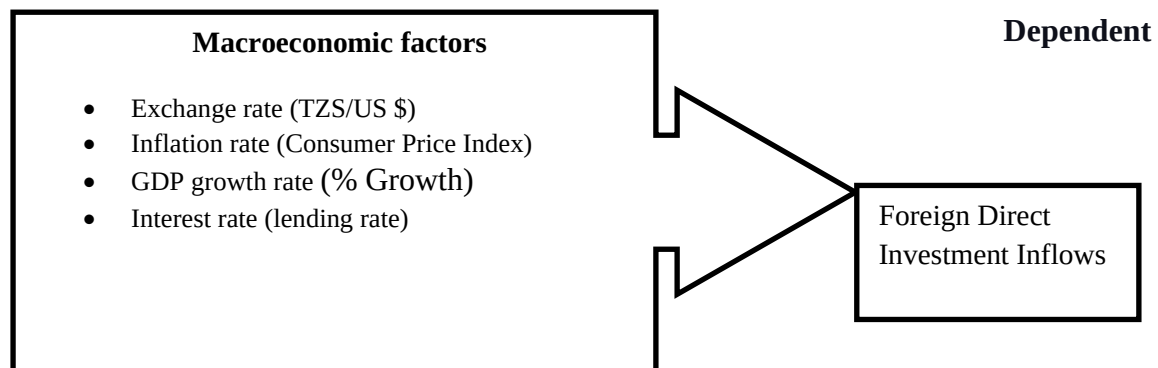
selected period, 1980 to 2012 but natural resources availability was negatively related to FDI inflows implying that inadequate of natural resources reduces the FDI inflows.

Bwana and Tumaini (2021) examined the relationship between FDI inflows and the key macroeconomic indicators in Tanzania by including inflation rate, exchange rate and trade openness for the period of 50 years from 1970 to 2019 and results revealed a significant relationship between exchange rate and FDI inflows in the long run. The study further added that the change in FDI inflows was significantly attributed by the changes in exchange rates.

The critical literature survey suggested the most studied determinants of FDI which in most cases proved significance in different settings of the developing and emerging economies as presented in Figure 3. The conceptual framework presented mimics the expected relationship between the explanatory variables and the response variable.

Figure 3: Conceptual framework

Independent Variables



Source: Author, 2022

Methodology

Design

This study used the time series data spanning from 1995 to 2020 since most of the macroeconomic indicators were easily captured and tracked and in 1997 another new and more formal investment policy in Tanzania was officially put into operation (UNIDO & TIC, 2014). The data were collated from the Central Bank of Tanzania (BOT).

Target Population

This research studied the financial sector in the Tanzanian economy. It assessed the determinants for foreign direct investment decisions in the financial sector by using data sourced from the Central Bank of Tanzania (BOT).

Sample size and Data sources

The sample was obtained from the time-series data from trusted sources, the Bank of Tanzania from the 1995 to 2020 period whereby a total of 26 observations per each selected variable as per this study purpose was used. The annual time series data on the selected variables were obtained or extracted from the Central Bank of Tanzania databases as well as reports.

Variables and measurement

Table 1: Measurement outcome of the variables

Variables	Measurement outcome
FDI inflow	The inflows at market value
Exchange rate	It measured costs of production inputs, locally and abroad
Interest rate	The price charged by the lender. It tells the value of capital
Inflation rate	The general price increase of good or services in a country
Economic growth rate	It measures the economic performance of the country

Data Analysis

This study adopted quantitative data analysis techniques whereby different tests of time series including data stationarity and co-integration tests. The Augmented Dickey Fuller and Phillips-Perron unit unit root tests were used in testing whether the data series were stationary or not. The Autoregressive Distributed Lag (ARDL) Model was employed in assessing the relationship between the response and explanatory variables.

Therefore, the general form of ARDL framework of FDI Inflows was written as

$$\ln FDI_t = \alpha_0 + \beta_1 \ln FDI \text{ Inflows}_{t-1} + \beta_2 \ln \text{Exchange Rate}_t + \beta_3 \text{inflation Rate}_t + \beta_4 \text{inflation Rate}_{t-1} + \beta_5 \text{Interest Rate}_t + \beta_6 GDP_t + \sum_{i=0}^{q_1} \theta_i \Delta \text{Inflation Rate}_{t-i} + \varepsilon_t \quad (1)$$

The equation 1 can be written in the error correction model (ECM) as

$$\ln FDI_t = \alpha_0 + \sum_{i=0}^{q_1} \theta_i \Delta \text{Inflation Rate}_{t-i} + \rho ECM_{t-1} + \varepsilon_t \quad (2)$$

Whereby,

β_i , represent the coefficient showing the long run relationship and θ_i represent the short run dynamics; and q_1 are the lags for the dependent variables, Δ , the first difference operator, α_0 is a constant, ECM_{t-1} , is a year lagged error correction term residual from the long run co-integration equation, ρ is the speed of previous disequilibrium correction and ε_t refers to residuals.

Results And Discussion

Descriptive statistics

The description of the data was based on measures of central tendency, measures of dispersion as well as the measures of distribution. The results are presented in Table 2.

Table 2: The descriptive statistics

Descriptive Statistics	Interest rate	GDP growth rate	Inflation rate	Exchange rate	FDI Inflows
Observations	26	26	26	26	26
Mean	18.4681	6.0174	8.8356	1366.123	106.3615
Median	16.1968	6.5457	6.5875	1270.970	61.33350
Max	35.9500	7.9045	27.4002	2298.465	752.2
Min	14.1403	3.3174	3.2911	550.3600	3.3
Standard Deviation	5.7164	1.3341	5.8709	580.1719	151.2207

Skewness	2.1741	-0.5342	1.6522	0.3667	3.2276
Kurtosis	6.8756	2.1158	5.2864	1.8972	14.0592

Source: EViews 12 computation

Stationarity Tests

Augmented Dickey Fuller Unit root test

The ADF stationarity test results revealed that FDI inflow, Exchange rate, GDP growth rate were stationary at first difference or integrated of order one I (1). Inflation rate and Interest rate were just stationary at level form which means that were integrated of order zero, I (0).

Table 3: ADF Unit root test

Variable	Augmented Dickey Fuller Test				
	Level form statistic	p-value	First difference statistic	p-value	Decision
FDI inflow	-2.977293	0.0509	-7.687181	0.0000**	I (1)
Inflation rate	-3.936686	0.0061**	-	-	I (0)
Exchange rate	-0.024953	0.9475	-5.109171	0.0004**	I (1)
Interest rate	-7.318631	0.0000**	-	-	I (0)
GDP Growth rate	-2.676739	0.0920	-6.665103	0.0000**	I (1)

(**) indicates significance at 5% level of significance: **Source:** EViews 12 computation

Phillips Perron unit root test

The Phillips Perron stationarity test was employed to supplement the results given by ADF test as of making the right decision on time series stationarity. FDI inflow, Exchange rate, GDP growth rate were found stationary after the first difference, I (1) whereas Inflation rate and interest rate were stationary at level, I (0). The results are presented in Table 4.

Table 4: PP unit root test output

Phillips Perron Test					
Variable	Level form statistic	P-value	First difference statistic	P-value	Integration Decision
FDI inflow	-2.983453	0.0503	-7.919330	0.0000**	I (1)
Inflation rate	-3.880892	0.0070**	-	-	I (0)
Exchange rate	0.192909	0.9665	-5.192824	0.0003**	I (1)
Interest rate	-6.305640	0.0000**	-	-	I (0)
GDP Growth rate	-2.584335	0.1093	-7.794737	0.0000**	I (1)

(**) indicates significance at 5% level of significance: **Source:** EViews 12 computation

Model selection

A total of sixteen models were evaluated before the selection of optimal lags of (1, 0, 0, 1, 0) as indicated in Table 5. The R-squared and Adjusted R-squared values of the general ARDL model indicated that, the 78.53% and 71.38% respectively, of variability in the decision of the foreign investors in the financial sector has been explained by the exchange rate and the combination of current inflation rate and the one-year lagged values of the inflation rate. The model selected was highly significant at 5% significance level with the Prob (F-statistic) being 0.000035 which implied that the whole model was the best fit.

Table 5: The ARDL General Model (1, 0, 0, 1, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob*
Log FDI Inflows (-1)	0.15117	0.185504	0.081492	0.9359
Log (Exchange rate)	3.064547	0.758428	4.040658	0.0008
GDP growth rate	0.099659	0.169232	0.588890	0.5633
Inflation rate	0.026011	0.062369	0.417056	0.6816
Inflation rate (-1)	0.208684	0.066732	3.127196	0.0058
Interest rate	-0.101079	0.055213	-1.830695	0.0838
C	-18.96707	5.450752	-3.479716	0.0027
R-squared	0.785335	Mean dependent variable		3.948923
Adjusted R-squared	0.713780	S.D dependent variable		1.375256
S.E of regression	0.735755	Akaike info criterion		2.455658
Sum of squared residual	9.744045	Schwarz criterion		2.796943
Log likelihood	-23.69572	Hannan-Quinn criterion		2.550316
F – Statistic	10.97526	Durbin Watson		2.321267
Prob(F-statistic)	0.000035			

Source: EViews 12 computation

Co-integration test

The results (Table 6) confirmed an existence of long run relationship among the variables as the F-statistic, 6.42 being greater than critical value 4.01 on the upper bounds at 5% which suggested that the series can return into its previous value or equilibrium point in the long run.

Table 6: ARDL Bounds test for cointegration

Test Statistic	Value	DF
F – statistic	6.422368	4
Critical value bounds		
Significance	Lower bound	Upper bound
	I (0)	I (1)

10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Source: EViews 12 computation

Determinants for Financial Sector Foreign Direct Investment

The determinants were examined under two economic conditions namely the long run and short run periods since the data series revealed the existence of long run relationship in the variables. Therefore, the results (Tables 7 and 8) presented long run and short run equations that explain the relationship of the variables respectively.

Table 7: Long run ARDL output

Variable	Coefficients	Std. Error	t-statistic	p-value
Log (Exchange rate)	3.111585	0.476936	6.524120	0.0000**
GDP growth rate	0.101189	0.172686	0.585970	0.5652
Inflation rate	0.238298	0.048675	4.895662	0.0001**
Interest rate	-0.102630	0.058229	-1.76252	0.0950

Source: EViews 12 computation

Table 8: Short run output

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	-18.96707	3.035286	-6.248857	0.0000
D (Inflation rate)	0.026011	0.042870	0.606751	0.5515
Coint Eq (-1) *	-0.984883	0.157209	-6.264807	0.0000

R-squared	0.642146	Mean dependent variable	0.008540
Adjusted R-squared	0.609614	S.D dependent variable	1.065151
S.E of regression	0.665516	Akaike info criterion	2.058307

Sum of squared residual	9.744045	Schwarz criterion	2.155817
Log likelihood	-23.69572	Hannan-Quinn criterion	2.085352
F-statistic	19.73880	Durbin Watson	2.321267
Prob(F-statistic)	0.000012		

Source: EViews 12 computation

Long run determinants

With the basis on the long run FDI determinants (Table 7), exchange rate revealed positive significance relationship ($0.000 < 0.05$) and further indicated that a 1% increase in the foreign Exchange rate could result to an increased FDI inflow by 3.1%. This implied that, foreign direct investors in the financial sector were positively and significantly attracted with a stable increase in the foreign exchange rate between host country (Tanzania) currency and the foreign investor's currency. Moreover, as the units of the Tanzanian currency increases per 1 USD implies that the Tanzanian currency depreciates. Theoretically, depreciation of local currency lowers the relative cost of capital and hence the production cost as well and in turn supports more foreign direct investments (Cambazoglu & Gunes, 2016). Therefore, the decision of foreign direct investors had been influenced by how the Tanzanian currency depreciates against the foreign currency since investors could get more capital with their little wealth. These findings confirmed those of Ayomitunde *et al.*, (2020) in Nigeria who found that 1% increase in exchange rate resulted to increased FDI inflows up to 0.29% significantly. Also, the findings concurred with those of Mtumwa (2019) in Tanzania who found that a 1% increase in the exchange rate led to a significant 1.7% increase in FDI inflows. Furthermore, the findings complied with those of Zakari (2017) in Nigeria who found a positively significant relationship between exchange rate and FDI inflows. This implies that an increase in exchange rate in most of the Sub-Saharan countries leads to an increased FDI inflow whereby in the context of this study the decision of the foreign investors was positively influenced as the local currencies of the respective countries depreciated and hence attracted more foreign direct investments.

Besides that, it was found that the of Inflation rate of Tanzania, positively related to financial sector FDI inflows and highly significant in the long run, that is a unit increase in the

inflation rate could result into an increase in the FDI inflows by 23.8%. This finding confirmed and complied with those of Ogono, Obange and Odhiambo, (2017) who also found a positive and significant relationship between inflation rate and FDI inflows in Kenya such that a unit increase in inflation rates in the previous two periods could increase FDI inflows by 2.21%. Also, the findings complied with Mtumwa (2019) in Tanzania that 1% increase in inflation rate resulted to an increase of about 1.73% in the FDI inflows in Tanzania. However, this finding was contrary to the expected negative relationship between inflation rate and FDI inflows. This can be due to the fact that, inflation is among of the macroeconomic indicators which can sometimes give out controversial results but it must not exceed a certain economically accepted threshold where inflation cannot be termed as serious to the economic performance. This was also the case for the studies Prakash and Kumar (2017) as well as of Alshamsi, Hussin and Aza (2015) on the inflation-FDI nexus. Furthermore, this suggests that when the increase in the general price level of goods and services has just started before going beyond an economically accepted safe threshold, at first the investors may be attracted with the just started rise in the price of good or service which may directly be linked with the type of investment as it is the case for this study, that inflation in the long run could attract more inflows. Therefore, for a long time in Tanzania, the inflation rate had been attracting financial sector foreign direct investment, suggesting that most of the time the inflation rate in Tanzania has been within the acceptable threshold of a single digit index which is economically recommended.

Moreover, economic (Gross Domestic Product) growth rate does not significantly influence foreign direct investment in the financial sector in Tanzania. This claim was withheld since the annual rate of growth of Gross Domestic Product in Tanzania had a positive relation with financial sector FDI inflow in the long run but insignificant or with very low effect to financial sector foreign direct investment decision. Furthermore, findings imply that the decision of foreign direct investment in the sector in question could not be seriously influenced by growth trend/rate of the gross domestic product. This finding supported those of Gichamo (2012) who indicated that Sub-Saharan Africa FDI inflows could not significantly be increased by GDP growth rate hence it is likely to have same influence to foreign direct investors decision as well. Although in some sub-Saharan countries can be significant, for instance Ogono, Obange, and Odhiambo (2017) found GDP growth rate

having a positive and significant in explaining FDI inflows in Kenya. Therefore, generally these findings suggest that GDP growth rate may have an influence of the decision for foreign direct investment depending on the size of the country's annual GDP growth rate attributed by the total country domestic production.

The study also tested the null hypothesis that Interest rate has no significant effect on foreign direct investment decision in the financial sector in Tanzania. It was found that the lending interest rate had a negative relationship against FDI inflow in the financial sector as expected; that is a unit increase in the lending interest rate may result to a decrease of up to 10.3% in the FDI inflows although it was found statistically not significant. But this suggested that, financial sector foreign direct investment can be influenced by lending interest rate as the higher rates discourage the investors to invest in the financial sector. These findings complied with those of Ndolo (2017) on determinants of FDI in Kenya but those of Ahmed (2021) were positive and significant. Therefore, the relationship between the two being positive or negative may depend on a number of factors like the country in particular financial system stability and economic performance. Business might sometimes experience a down drop which may affect its sustainability. This may call for external financing or funding of the business rather than using the set aside capital for investment whereby the investors may seek for financial assistance from investment banks and can opt to secure loan from banks or financial investment institutions with low price or interest rate (lending interest rate).

Short run dynamics

In the short run period, persistent increase in the price level of Tanzania measured using CPI found positively related to the current FDI Inflows in the financial sector as well but statistically insignificant.

On the other hand, the short run shocks or changes exerted by exchange rates, interest rate, GDP growth rate as well as the general trend of FDI inflows are not significant factors for FDI inflows in the financial sector but the effect of the changes in the inflation rate at particular regular time interval may increase FDI inflow up to 2.6%. This means that, currently financial sector foreign direct investment inflows cannot be influenced in any direction by the current exchange rate, GDP growth rate, and current overall lending interest rate (Table 8).

Furthermore, the coefficient of the error correction term, $\rho = -0.9849$, indicates that whenever the series experience a shock or changes in the short run, the model selected for relationship shows that the dynamics can be recovered and series can go back to the original equilibrium at a 98.49% speed. This implies that there is only 1.51% of the decision to be influenced other factors rather inflation rate.

Conclusion, Implications and recommendation

Conclusion

The findings indicated that in the long run, exchange rate and inflation rate have a significant effect on the FDI inflows and so the likelihood of foreign direct investors to invest in the financial sector in Tanzania has been positively influenced with exchange rate and inflation rate. Therefore, to a great extent the variability in in the FDI inflows was due to the change in exchange rate and the inflation rate. Furthermore, in the short run the selected macroeconomic factors have no influence on foreign direct investment flows.

Implications and recommendation

The study assessed the determinants of foreign direct investment in the financial sector and found that exchange rate and inflation rates are the significant determinants for the foreign direct investment in any financial sector component whether commercial banks, investment banks, insurance industry, or stock market few to mention. The study further recommends on the following to the ministry of finance and planning;

The monetary measures like money supply, open market operation or reserve requirement have to be re-visited and see if they work appropriately with economic stability of Tanzania. These have great influence on the inflation rate of the country as well as the exchange rate level and the interest rate.

The fiscal policies like government spending or rate of taxation on certain type of government revue must be regularly regulated to ensure reasonable money supply in the economy.

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Factors Influencing Tax Compliance Among Wholesale Traders In Dodoma City, Tanzania

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Abstract

As governments look for ways to raise money to address social demands, tax compliance is a crucial issue for countries all over the world. This study's main goal was to determine how economic and non-economic factors affected wholesale traders' tax compliance. A cross-sectional research design was used in the study to gather data from 95 wholesale traders in the city of Dodoma. A questionnaire was utilized to gather quantitative data. The results showed that tax rates and the amount of actual income have a positive substantial influence on the statistical significance of tax compliance. According to the study's findings, the government ought to help wholesalers by promoting awareness of the significance of economic issues for obtaining tax compliance. To ensure tax compliance, the policy should also be put into effect and made more conducive to economic conditions. The wholesalers should then express their opinion in order to find other causes for noncompliance.

Key words: Economic factor, noneconomic factors, tax compliance, wholesale traders

Introduction

Tax revenue is necessary for countries to finance their budgets and pay for public spending (Alaarajet *al.* 2018). According to studies conducted in various nations, the ratio of tax revenue to gross domestic product (GNP) in developed countries is approximately 25–30%, while it is 28% and 5%, respectively, in developing and particularly impoverished nations (Reza et al, 2011). Tanzania is one of several developing nations with weak, corrupt, and replete with widespread evasion and coercion tax administration. However, in many

instances, compliance rates in these (developing) nations are below 50%, and a sizable section of the informal economy completely evades taxation (Brautigam *et al.* 2018). According to James (2015), one of the main issues facing various revenue bodies is tax compliance. Sometimes, because the tax payers don't grasp the existing laws and regulations, it is difficult to convince them to follow the rules. On the other hand, tax payers have a natural tendency to lower their tax obligations, whether legitimately or illegally; this leads to improper tax return filing and a loss for the government. Additionally, the cumbersome regulatory environment and tax system, which frequently have a detrimental impact on the development of tax payers, particularly Small and Medium Enterprises, make tax compliance difficult (Msato, 2016). Kamote and Ngowi (2015) noted that wholesale dealers, who are Small and Medium Enterprises (SMEs), in Tanzania, exhibit the highest level of non-reporting of their sales to the tax authority, particularly when the transaction is carried out in cash. However, the usage of Electronic Fiscal Devices (EFD) devices by SMEs has not been as successful as reported; of the 100 surveyed SMEs' business premises, only one was found to offer EFDs receipts without the customer's request (Kamote and Ngowi 2015). According to Viswanadham (2017), Dodoma City's tax compliance is average at best because SMEs have been reluctant to pay their taxes in accordance with the established tax laws and regulations. This is because, in Dodoma, about 12.5% of wholesalers and retailers indicated that their companies face onerous government requirements to stop engaging in practices that make it difficult to comply with tax laws. The amount collected in Dodoma city, according to a report from the Tanzania Revenue Authority, was Tsh 39,428,700,000, an increase of Tsh 9,577,000 from the tax that the TRA had collected in the fiscal year 2016–17.

In Tanzania, managing income taxes and collecting taxes presents a significant challenge (TRA, 2020). Between the 2015 and 2020 fiscal years, it fell by 1.5%, and Tanzanian taxpayer compliance also declined. Tax transparency is a major contributing factor, with high levels of transparency increasing taxpayers' voluntary compliance while low levels of transparency result in a decline in taxpayers' voluntary compliance (TRA, 2020).

Finding the elements that contribute to individual taxpayers' tax compliance has been the subject of several prior studies. These elements, however, vary from one place to another. Several studies have examined taxpayers' adherence to social norms, procedural justice, and faith in the government and tax authorities, tax knowledge, and the complexity of taxes

(Benket *al.* 2016, Raihana and Pope 2019, Gobena and Van Dijke, 2016). However, there is little consensus among earlier studies about the variables affecting entire seller traders' tax compliance. By investigating economic factors influencing tax compliance among entire seller traders in Dodoma city, this study filled the existing knowledge vacuum.

Most of empirical studies review focused on why SMEs do not pay tax, factors affecting tax compliance, and tax payer's attitude. However, these factors are varied in one region to another. Some research related the compliance to the social norms of taxpayers (Benket *al.*, 2016; Raihana and Pope, 2019), procedural justice (Gobena and Van Dijke, 2016), trust in the government and tax authorities (Jimenez and Iyer, 2016), tax knowledge and complexity of tax (Saad, 2014; Ibrahim, 2019). Nevertheless, previous studies have no agreement on the factors influencing the tax compliance by whole seller traders. Therefore, this study addresses the existing knowledge gap by examining factors influencing tax compliance among whole seller traders in Dodoma city.

Literature Review

Theoretical Framework

Tax Compliance

According to Mahangila (2017) tax compliance is defined as the voluntary payment of taxes in accordance with the spirit of the tax laws (i.e., committed tax compliance); the payment of tax for fear of penalties and audits in line with the spirit of tax laws (i.e., capitulate tax compliance); and the paying of taxes after arranging taxpayers' activities to minimize tax liabilities by complying with tax laws (James and Alley, 2012). McKerchar and Evans (2019) provide that tax compliance occurs when a taxpayer registers with the revenue authority as required; files the required returns on time; accurately reports tax liability (in the required returns) in accordance with the prevailing legislation, rulings, return instructions and court decisions; pays any outstanding taxes as they fall due; and maintains all records as required". In this study, tax compliance refers to the reporting and paying of tax liabilities in order to comply with tax laws.

Wholesale Traders

Wholesale traders refer to the business men/women making the exchange of goods within the boundaries of a country (internal trade). Wholesale trade is concerned with buying goods from manufacturers or dealers or producers in large quantities and selling them in smaller quantities to others who may be retailers or even consumers. Wholesale trade is undertaken by wholesale merchants or wholesale commission agents (Muturi, 2015). Wholesalers may generally involve the internal business firms selling products and services in bulk as facilitating units to retailers hence to final consumers.

Economic Deterrent Theory

This theory was first developed by Allingham and Sandmo (2010). It assumes that the tax compliance behavior is influenced by economic factors. The tax payer measures the cost and benefit for tax evasion, the tax rate and penalties for fraud and probability of detection are the main determinant of cost and benefit of tax evasion. This theory views an individual tax payer as rational economic agent who assesses the cost and benefit of evading tax and thus chooses not to pay it if the benefit of non-compliance outweighs the cost (Walsh, 2012). This theory implies that when there are low audit probabilities and low penalties the tax evasion tends to increase while if there are higher probabilities of detection and penalties very few people will evade taxes (Torgler, 2003). The base of this assumption is that stricter audit and very heavy penalties for offenders is a base for reducing non-compliances.

The theory has been criticized in that; it is not realistic in explaining the tax payer compliance as it predicts that the general substantial non-compliances beyond what is really observable (Slemrod, 2007). Despite the use of audit and penalties, tax evasion and avoidance are still common in developing countries and it significantly affects their economy through low domestic revenue collected due to non-tax compliances. In reality, there are people who never attempt to evade tax even if the probability of detection is zero (Sour, 2004). Therefore, a number of authors have argued that the actual question regarding tax compliance should be why people pay taxes and why not evade them (Slemrod, 2007). Furthermore, the theory failed to consider behavioral factors such as attitude, perception, and moral judgments (Lewis, 1982). Other important determinant of tax compliance ignored by the theory includes code of conducts such as moral and ethical constraints that have potential to prevent people

from cheating in their taxes (Sour, 2004). The theory explains that the tax rate and penalties for fraud and probability of detection are the main determinant of cost and benefit of tax evasion.

The deterrence theory of tax compliance assumes that compliance is influenced by economic factors like tax rates, penalties for fraud and detection probability. The theory views an individual tax payer as rational economic who assesses the cost and benefit of evading tax. The general objective of my study was to assess the tax compliance perceptions among the domestic wholesalers. From the different theoretical argument this study was guided by the economic deterrence theory. The reasons of using this theory were due to fact that each theory is limited to explain the tax compliance perceptions among the domestic wholesalers. Since economic deterrence theory is based on economic factors and non-economic factors.

Empirical Literature Review

Mahangila *et al.* (2014) did a study on determining whether or not an increase in income tax compliance costs leads to a decrease in income tax compliance. This experimental study involved 75 small and medium entrepreneurs (SMEs) based in Dar es Salaam as the business hub in Tanzania. The study was based on laboratory test with exceptions of respondents' perceptions and opinions. The general findings revealed that tax non-compliance significantly increased as tax compliance costs increased. Mwansele (2014) conducted a study on tax compliance in local government authorities in Tanzania, taking Sumbawanga District Council as a case study. The major purpose of the study was to establish the reason behind tax evasion in Sumbawanga District Council. Examining how the collected tax is accounted for in Sumbawanga as well as determining the methodologies used to collect impose taxes in Sumbawanga District Council. 51 employees from Sumbawanga District Council participated in the study through convenience sampling. Data were analyzed using descriptive statistics. The findings revealed that inappropriate enforcement, complexity of the by-laws, behavioral attitude, unsatisfactory return in form of service delivery, and absence of trustworthiness in the local government were the factors affecting local tax compliance in Sumbawanga District Council. This study did not manage to determine voluntary tax compliance as function of service quality, taxpayer trust, fairness of tax laws and regulations and public governance quality.

Furthermore, Mtasiwa (2011) conducted a study with key intention to investigate the hindering factors to potentiality of tax/revenue collection in Tanzania. TRA was facing complaints due to vices such as tax evasion, tax avoidance and tax complexities that were rampant in the country. The study used a survey research design and mixed approaches to data collection. The study found out that the authority officials were facing difficulties in some areas such as administration, coordination and oversee of all tax activities. In this regard, the study found that the authority failed to promote tax compliance and effectiveness to counteract frauds and evasions because of incompetency of some to its officials.

Dedu (2015) conducted study in Dodoma Municipality to assess the challenges of tax collection. The findings revealed that tax collection in Dodoma Municipality was challenged by ineffective statutory rate, ineffective means of transport, varied methods to determine tax base and inconsistency in tax valuation. Nzioki (2014) conducted a study on “analysis of factors affecting tax compliance in real estate sector a case of real estate owners in Nakuru town, Kenya. The study specifically sought to determine the effect of tax compliance cost, tax education and knowledge, fines and penalties and perceived opportunity for tax evasion on tax compliance in real estate sector. This study was guided by theory of planned behavior. The explanatory study design employed a sample size of 271 which was drawn from the targeted population of 841 real estate investors. The method of data collection employed was structured questionnaire.

Also, Maranduet *al.* (2015) reviews factors that determine taxpayer compliance from a social marketing point of view. The study objectives were to identify the factors that determine taxpayer compliance, to assess the collective adequacy of the factors employed in various studies over time to explain tax compliance and to conceptualize the various determinants of tax compliance into a meaningful whole. It recommended that future studies should seek to develop a few theories based set of relevant determinants of tax compliance that can yield accurate predictions. Another recommendation was that tax policy makers are advised to stop from exclusive use of the conventional coercive methods (subjective control factors) normally used to compel tax compliance; instead, they should take a balanced approach to tax enforcement that will also encourage voluntary compliance through change of attitudes and norms.

Furthermore, Helhel and Ahmed (2014) conducted a study on factors affecting tax attitudes and tax compliance a survey study in Yemen. The objective of the study was to bring an insight about influence of attitudes and consideration of individual tax payers on tax compliances taking internal and external factors. The study was conducted in Sanaa the capital city of Yemen to evaluate and rank the factors that reduces taxpayer compliances. A questionnaire was designed and distributed to tax payers in order to learn their opinions. The result showed that high tax rates and unfair tax system are the two most crucial factors associated with low compliance. The researcher reported that insufficient tax auditing; little deterrent effects of tax penalties and tax amnesties enacted frequently have impact on tax payer's compliance decision. On the other hand, factors like few tax officials, frequent tax code changes affect compliance to a lesser extent. It also found that tax collected is not returned to the public goods and services. When the responses are compared by gender and age, women were found to be more compliant compared to males to taxation whereas age is not a significant factor in general, especially for external factors. In addition, the older group was found to be more compliant compared to younger group in terms of factors having significant difference.

The finding showed that compliance cost had negative effect on level of tax compliance and both tax knowledge, fines / penalties and education had positive effect on level of tax compliance among real estate investors. Conversely, high compliances cost and high opportunity for tax evasion will reduces tax compliance among real estate investors. Thus, tax compliance cost should be in a way that does not encourage taxpayers to evade tax. There should be stiff enforcement of fines and penalties to deter tax evasion. Additionally, tax authorities should simplify processes involved in filling of returns and payment of taxes. Adesina and Uyioghosa (2016) conducted a study on tax knowledge, penalties and tax compliance in small and medium scale enterprises in Nigeria using the survey study design. The objective of the study was to measure the effect of tax knowledge and penalties, in tax compliance. The result obtained from questionnaire were analyzed using the ordinary list square regression method, which revealed that tax knowledge had positive significant impact on tax compliance but tax penalties had insignificant positive impact on tax compliance.

Ng'eni (2016) examined factors affecting tax morale and voluntary tax compliance towards effective tax administration in Tanzania. This was the desktop and library survey, which

aimed at reviewing the general mechanisms of tax administration focusing on tax morale and voluntary tax compliance as a key attributes of tax revenues collections. The study showed that tax administration is most important in the process of increasing the government revenues. It also unveils crucial aspects of tax administration which tax authority should asses their cause and effect towards tax administration. It is notable that tax is the main sources of the government revenue therefore recommendations for improvement of tax administration are of importance to the policy makers and implementers in the world at large.

The study recommended that the government should therefore add more effort to increase tax knowledge and tax education should be included in school curricula at all times. Small and medium scale business owners should also hunt for tax knowledge and attentiveness for the mutual benefits of the governments and taxpayers. Therefore, governments should focus on increasing their reputation and credibility as a means of gaining the taxpayers trust which will, in turn, enhance the issues of national pride and political affiliations. This will influence the increase of tax compliances.

Methodology

Different methods, techniques and analytical tools were used in addressing factors affecting tax compliance among wholesale traders. The study investigated the influence of economic factors on tax compliance for Promoting Tax collection among wholesale traders. The study was carried out in the wards of Majengo, Viwandani, and Madukani in the city of Dodoma. Dodoma was chosen as the research area because of the city's rapid growth, which has led to an increase in SMEs, particularly wholesalers, and due to population growth brought on by the relocation of government functions, which has increased domestic wholesales in Dodoma. The study uses a cross-sectional research design, gathering information from the general public in order to confirm findings and respond to research questions all at once. The study targets 12,498 business owners of wholesalers' stores in Dodoma city who make up the study population, served as the source of the sample size for this investigation. 100 wholesalers' trades were therefore included in the sample size through the use of Yammane formular. A systematic sampling technique was used in this study's sample approach. Each component of the population has an equal and known chance of being chosen in systematic sampling, a sort of probability sampling. As a result, wholesalers in the sampled wards were sampled using a

systematic sampling approach in which a respondent was picked after visiting every two shops until the predetermined amount of samples was acquired. The chosen respondents were completed out a questionnaire, which is a written collection of questions. Respondents read the questions in a questionnaire, interpret the expectations, and then record the replies (Kumar, 2011). To obtain even more specialized information related to the research investigation, both open-ended and closed-ended questionnaires were used. To gather information from wholesale traders, these questionnaires were dispersed. Both descriptive and inferential statistics was adopted in this study. Descriptive statistics was used to perform frequencies and percents of demographic information. Inferential statistics were used to perform regression analysis in order to examine the impact of economic factors on tax compliance among wholesale traders. In addition, the respondents' perceptions were recorded on a five-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree), and they were ranked after the mean was recorded. Furthermore, because the dependent variables were included and handled as dummy variables (1=High, 0=Low), binary logistic regression was performed to assess the significance association between the independent and dependent variables.

$$\text{Logit (Y)} = \ln [p / (1-p)] = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon.$$

Whereby; Y is a dependent variable

Where P is the probability of the event of interest, α is the Y intercepts, β_n are regression coefficients, and X_1, X_2, X_3 are a set of predictors α and β s are typically estimated by the maximum likelihood (ML) method.

Findings And Discussion

Demographic Information

Sex

The findings as presented in Figure 1 reveals that, majority of respondents were male (57.9%) and 42.1% were female.

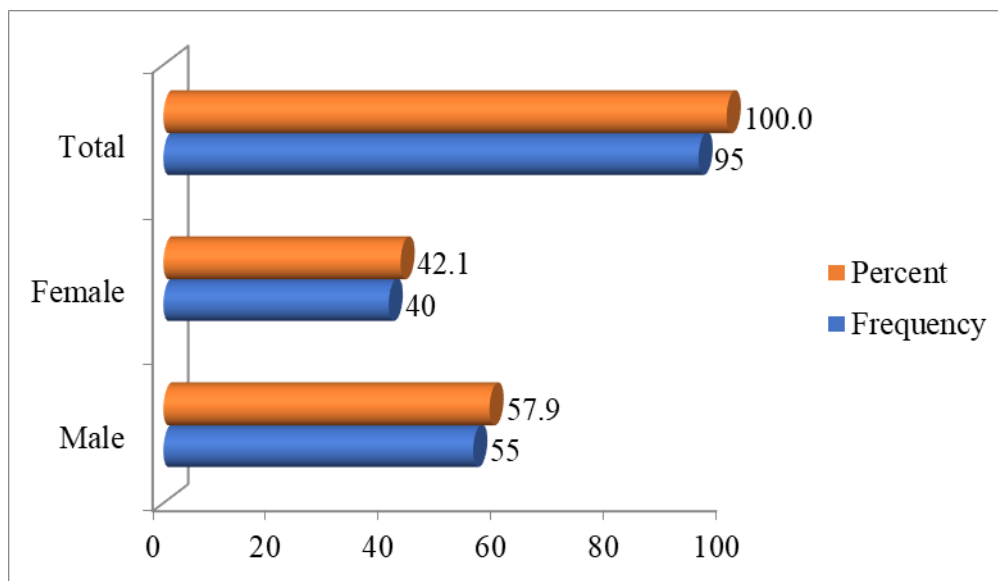


Figure 1: Sex of respondent

Source: Field Research Data, 2022

These findings imply that wholesale traders comprise of more men than female thus contributes more to tax revenues in comparison to female wholesale traders. These results were not in harmony with those of Asmare&Yimam (2020) who revealed that enterprises' tax compliance behavior is significantly affected by their owners' gender: female owned enterprises are more likely to be tax compliant than those owned by men. The correlation between the owner's gender and tax compliance also becomes stronger as enterprises get larger in size.

Age of Respondents

The findings as presented in Table 1 revealed that, majority of respondents about 47.4% were in the range of 36 up to 45 years old.

Table 1: Age of Respondent

	Frequency	Percent
Below 21 Years	10	10.5
21-35 Years	20	21.1
36-45 Years	45	47.4
Over 45 Years	20	21.1

Total	95	100.0

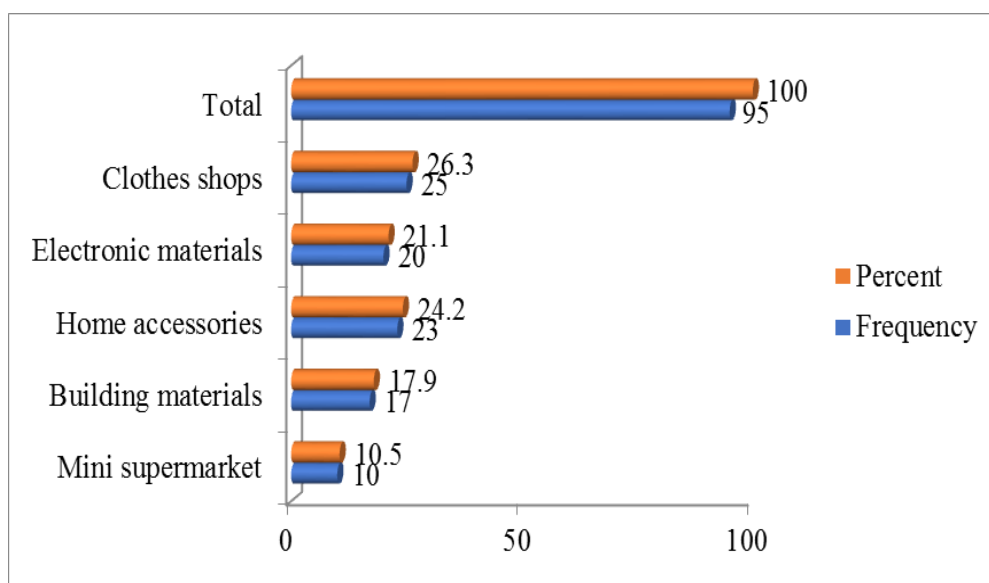
Source: Field Research Data, 2022

These results imply that younger persons are mostly involved in entrepreneurship activities and are the mostly engaging age group in paying tax and thus contribute more in revenue collection. According to Braithwaite *et al.* (2006), one of the more consistent predictors of tax noncompliance has been age: younger people are less compliant in attitude and behavior than older people. Therefore, the following study is reliable to be mostly covered by youth in order to investigate factors for tax compliance for promoting tax collection among wholesale traders.

Business of Respondents

The finding as presented in Figure 2 indicates that, majority of respondents in this study (26.3%) were involving in cloth shops followed by home accessories (24.2) and electronic materials (21%)

Figure 2: Respondents Business



Source: Field Research Data, 2022

These results imply that most of wholesale traders in this area of study are selling clothes, followed by electronic materials and home accessories, which implies that their tax revenue

contribution is higher than that contributed by other industries. Also because of their free involvement during interviews and readiness to be assessed in this study, it gives good sign of their compliance to different laws and regulations governing their businesses including tax laws. These results were supported by those of Paulo (2020) who revealed that the clothing and textile industry has been important to the expansion of the manufacturing sector in any economy of nation.

Business experience

The findings as presented in Table 2 revealed that, in average respondents were having an experience of 12.68 years.

Table 2: Wholesaler's Business Experience

	N	Minimum	Maximum	Mean	Std. Deviation
Years of business	95	4	23	12.68	6.257
Valid N (listwise)	95				

Source: Field Research Data, 2022

These results imply that wholesale traders have experience in running their business and that are aware of tax issues and other laws and regulations governing their business. These results were supported by those Kamleitner *et al.* (2012) who revealed that small business owners are likely to perceive more opportunities not to comply than employed taxpayers; they are more likely to experience a lack of meaningful taxation knowledge; and they are more likely to face decision frames that render taxes as painful losses. Therefore, having knowledge of tax it does also depend on the experience of the business owners.

The Influence of Economic Factors on Tax Compliance for Promoting Tax Collection among Wholesale Traders

The impact of economic determinants on tax compliance among wholesale dealers in the city of Dodoma was examined using the binary logistic regression model. The level of actual income as well as tax rates, tax audits, and other economic conditions were examined as independent variables. To demonstrate how well the model fit the data, the Hosmer and

Lemeshow test was used for tax compliance. The p-value for the Hosmer and Lemeshow Test is 0.118, which is acceptable.

Table 3: Hosmer and Lemeshow Test for Economic Factors

Step	Chi-square	Df	Sig.
1	10.151	6	.118

Source: Field work research (2022)

Tax rates

Tax rates have a statistically significant positive effect on tax compliance at a level of $\beta=1.307$ and 5% (p-value=0.006), according to the results from Table 4 below. This implies that the tax compliance of wholesale dealers is increased by 1.307 times for every unit rise in tax rates due to economic factors. This is further supported by the odd ratio of 3.694, which suggests that local government authorities with tax audits are 3.694 times more likely to boost wholesale traders' tax compliance than local government authorities with lower or no tax rates. These findings differ from those of Mahangilaet *al.* (2014), who found a significant rise in tax non-compliance when tax compliance costs rose. Additionally, Helhel and Ahmed (2014) shown that low compliance is strongly correlated with high tax rates. The wholesale dealers are therefore extremely terrified of the tax system because an increase or drop in tax will not have an impact on their compliance, even if the government raises tax rates.

Table 5: Economic Factors on Tax Compliance among Wholesale Traders

	B	S.E.	Wald	Df	Sig.	Exp(B)
Tax rates	1.307	.479	7.444	1	.006	3.694
Tax audit	-1.545	.510	9.180	1	.002	.213
Actual income	1.357	.447	9.217	1	.002	3.883
Constant	-4.360	1.180	13.658	1	.000	.013

Source: Field work research (2022)

Tax audit

According to Table 5's data, tax audit has a statistically significant negative effect on tax compliance at a level of $\beta = -1.545$ and a statistical significance of 5% ($p\text{-value} = 0.002$). This translates to a 1.545 times reduction in tax compliance for wholesale dealers for every unit rise in tax audit as a result of economic factors. Having a tax audit in local government authorities as an economic factor is 3.694 times more likely to diminish wholesale traders' tax compliance than local government authorities with lower or no tax audit, according to the odd ratio of 0.213, which also supports this conclusion. These findings differed with those of Helhel and Ahmed (2014), who claimed that insufficient tax auditing frequently affected a taxpayer's decision to comply with the law. Since audits are not conducted for a specific reason, period of time, or individual, their presence indicates a decline in wholesale dealers' tax compliance. In this instance, tax audits are performed in relation to tax compliance but ineffectively for wholesale traders.

Level of actual income

The results from Table 5 showed that the level of actual income has a substantial positive relationship with tax compliance, with a $p\text{-value}$ of 0.006 and a statistical significance of 5% ($\beta = 1.357$). In other words, a 1 unit rise in the level of actual revenue as an economic component results in a 1.357-times increase in the tax compliance of wholesale traders. Having a level of actual income in local government authorities as an economic factor is 3.883 times more likely to increase the tax compliance of wholesale traders than local government authorities with a lower or no level of actual income, according to the odd ratio of 3.883, which also suggests this. In light of the fact that wholesale dealers are in a position to pay tax when their actual income rises, this raises the tax compliance of such traders.

The Influence of Non-Economic Factors on Tax Compliance for Promoting tax Collection among Wholesale Traders

The binary logistic regression model was used to analyze the influence of non-economic factors on tax compliance among wholesale traders in Dodoma city. The non-economic factors such as penalties, fines and tax system were tested as the independent variables. Tax

compliance was used as a dichotomous predictor variable of either high or low. Before further findings and discussion, the following are the analyses and interpretations of fitness of the model.

Also as presented in Table 6, the Hosmer and Lemeshow test which is also used to test model goodness of fit was 3.045 With $p=0.931$ (>0.05). Therefore, the recommended model (logistic regression) fit well the set of data.

Table 6: Hosmer and Lemeshow Test for Non-economic Factors

Step	Chi-square	df	Sig.
1	3.045	8	.931

Penalties

The findings from table 7 below revealed that the penalties have positive significant influence on the tax compliance at $\beta=0.958$ and not statistically significant at 5% (p -value=0.151). This means that 1 unit increase in penalties as a non-economic factor increases the tax compliance of wholesale traders by 0.958 times. This has also been indicated by an odds ratio of 2.605 which implies that having penalties in local government authorities as a non-economic factor is 2.605 times likely to increase the tax compliance of wholesale traders than local government authorities with lower or no penalties. These results were similar to those of Helhel and Ahmed (2014) who reported that little deterrent effects of tax penalties frequently have impact on tax payer's compliance decision. Therefore, increase in penalties to non-compliant taxpayers increase tax compliance, hence promotes tax collection among wholesale traders.

Table 7: The Influence of Non-Economic Factors on Tax Compliance for Promoting tax Collection among Wholesale Traders

	B	S.E.	Wald	df	Sig.	Exp(B)
Penalties	.958	.667	2.063	1	.151	2.605
Fines	2.092	1.044	4.017	1	.045	8.098
Tax system	1.008	.502	4.027	1	.045	2.739
Constant	-12.854	3.922	10.740	1	.001	.000

Source: Field Research Data, 2022

Fines

The findings from table 7 revealed that fines have positive significant influence to the tax compliance at $\beta = 2.092$ and statistically significant of 5% ($p\text{-value} = 0.045$). This means that 1 unit increase in fines as non-economic factor increases the tax compliance of wholesale traders by 2.092 times. This has also been indicated by odd ratio of 8.098 which imply that having fines in local government authorities as a non-economic factor is 8.098 times likely to increase the tax compliance of wholesale traders than local government authorities with lower or no fines. Likewise, imposition of fines to those wholesalers who avoid paying tax increases tax compliance because they will be afraid of more fines and thus promotes tax collection among wholesale traders.

Tax System

The findings from table 7 revealed that tax system have positive significant influence to the tax compliance at $\beta = 1.008$ and statistically significant of 5% ($p\text{-value} = 0.045$). This means that 1 unit increase in effective tax system as non-economic factor increases the tax compliance of wholesale traders by 1.008 times. This has also been indicated by odd ratio of 2.739 which imply that having effective tax system in local government authorities as a non-economic factor is 2.739 times likely to increase the tax compliance of wholesale traders than local government authorities with lower or no effective tax system. These results were similar to those of Helhel and Ahmed (2014) who showed that unfair tax system is the most crucial factors associated with low compliance. Therefore, fair tax administration systems influence tax compliance hence promotes tax collection among wholesale traders.

Conclusion and Recommendations

Conclusion

Tax rates and the level of actual income all have positive significant effect and statistical significance on tax compliance, while tax audit has a statistically significant negative effect on tax compliance. Based on the study findings, all three economic factors tested have significant influence on tax compliance for tax revenue collection among wholesale traders.

Furthermore, findings show that non- economic factors such as fines and tax systems have positive significant influence to the tax compliance and statistically significant, as fines and tax systems are perceived to be fair then people feel comfortable to pay taxes, hence increase tax revenue collection.

Recommendations

The Government should use economic factors tax rate and level of actual income in order to influence positively tax compliance and hence increase tax revenue collection among wholesale traders. Tax audits should be done properly for the purpose of improving tax compliance for the aim of increasing tax collection.

The Government can use effectively non-economic factors such as fines and tax systems to influence positively tax compliance in order to increase tax revenue collection among wholesale traders. Fine should be set in the way that tax payers perceive them fair.

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Challenges Hindering Business Women Access to Special Group Loans in Dodoma City Council, Tanzania

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Abstract

The challenges women have in obtaining special group loans from the Dodoma municipal council are examined in this study. 97 businesswomen from Dodoma city were randomly chosen for the study, and key informants were purposefully chosen from the government. WEOs, Council Business Officers, and Community Development Officers are a few examples of these public servants. Data analysis for the study included both descriptive and inferential statistics. The results demonstrate that a bad loan system causes problems with loan distribution because most borrowers shift from one location to another without telling anyone in charge. Additionally, internal migration, a bad information system, and a bad borrowing mentality are obstacles that the authority faces in providing business women with special group loans. The paper goes on to say that a bad loan system causes problems with loan distribution because most recipients migrate from one location to another without telling the appropriate authorities. Then, it is advised that business women spend money obtaining various business skills that will enable them to use and manage the loan successfully.

Key words: challenges, loans, special group, women, business

Introduction

Lending to the needy through organizations rather than individuals has gained popularity as a means of reducing poverty (Paxton, Graham, &Thraen, 2000). Women's behaviors in Sub-

Saharan Africa (SSA) have a negative impact on women's overall wellbeing and are therefore viewed as a severe societal issue (Paula & Okechukwu, 2017).

In comparison to men, Tanzanian women have lower economic and social status. The majority of women suffer from customs and conventional ideas, are undereducated, and are destitute (Wakara, Jumanne, Nyabakora, & Laurent, 2020). As a result, one of the major challenges in Tanzania and sub-Saharan Africa is the empowerment of women. However, women in Tanzania believe that semi-formal capital, such loans from the government, MFIs, SACCOS, and VICOBA, is the most easily accessible external capital (Lindvert, Yazdanfar, & Boter, 2015).

With the intention of assisting economically disadvantaged populations that were unable to obtain loans from financial institutions due to a lack of collateral, the government seed money for women, youth, and PWDs was first created by resolution of the parliament in 1993 (Said, 2021). Nevertheless, local council empowerment loans were only given out at 5% for women and 5% for youth, leaving out PWDs, in spite of the decision passed by the parliament. The interest rate on the loans was set at 1% (Kitabu, 2021).

Women are more prevalent because of poverty, which has also increased their vulnerability because they are often thought to be contaminated. As a result, these women's entrepreneurship abilities are not geared toward their success in businesses (Kudo, 2017). Despite its negative effects, women have historically had less access to credit and other financial services. Commercial banks frequently prioritize men and formal enterprises while ignoring women, who account for a sizable and expanding portion of the informal sector (Loomba Foundation, 2015). The purpose of this study is to examine the difficulties women face while trying to obtain special group loans from the Dodoma City Council.

The Tanzanian government ordered all local authorities to set aside 10% of their annual revenue exclusively for women, youth, and people with disabilities (PWDs), who lack work, have financial constraints, and have limited access to other opportunities (Semberya, 2020). However, for many years, official government programs and local cultural practices did not directly and effectively work to emancipate women, young people, and people with disabilities (PWDs) economically (Kitabu, 2021).

Nevertheless, social norms-related restrictions, challenges in obtaining financing, and difficulties accessing both public and commercial services exacerbate women's lesser assets and weaker potential to mobilize resources (Gaddis, Rahul, & Wenjie, 2017). For welfare outcomes to be successful, access to one's own revenue sources and bargaining leverage within the extended family become essential. As a result, women have fewer opportunities to accumulate wealth or generate an income and have less access to a variety of personal coping mechanisms after adverse shocks. They might be more susceptible to shocks than normal (World Bank, 2018).

Additionally, the government of Tanzania struggles with inadequate revenue collection to the LGAs, poor LGA allocation of the 10% of their own sources of revenue to groups of women, youth, and PWDs, which decreases the overall allocation of the money, and occasionally, LGAs with conflicting agendas (Kitabu, 2021). Although the government has taken steps to effectively govern 10% of local council loans for empowering women, youth, and PWDs, there is still a lack of access for women as the special groups to this set aside loan (9% of women had access to financial services, while nearly 30.3% were financially excluded), as was also demonstrated by Said (2021). This study evaluates the difficulties women face in obtaining special group loans from the Dodoma municipal council.

Theoretical Literature Review

Resource based theory

Literature reveals that Wernerfelt created the resource-based theory (1984). This idea essentially contends that internal resources managed by a corporation have the potential to be a source of long-term competitive advantage since they are valuable, uncommon, difficult to duplicate, and non-substitutable. Theory is concentrated on the resources and capabilities owned and controlled by the organization, which can increase the competitive advantages of the organization in terms of cost, time and quality. First, talks about the product from valuable resources being gladly purchased by consumers at a price much greater than the firm's costs to introduce such products onto the market. Second, describe output when it is limited in supply and therefore scarce. Third, provide output details when it is tough to be copied or purchased by rivals. According to Backman, (2015) the performance of any organization depends more on resource availability.

As a result, based on this research, the resources available that operating in cities like in those of Dodoma City especially financial resources that means capacity to finance the small business women in Dodoma City and human resources including potential skills of employee in the Dodoma City Council that will enhance the performance of loan transaction and empower those small business women to repay back such loan.

Empirical Literature Review

The study was conducted in Nakuru Kenya about challenges facing women in accessing credit from microfinance institutions (Waita, 2012). The population comprised 20 women entrepreneurs who had borrowed before from ECLOF Kenya. Purposeful sampling procedure was used to collect data from 20 members of ECLOF Kenya in the study area. The study findings revealed that each woman borrower may face particular barriers from access to finance, there are significant barriers to financing encountered by various women in business and intending to borrow. These barriers include, collateral requirements, business skills, cultural beliefs, and perception about women's borrowing all have significant effects on financing opportunity available to women.

The study was conducted in Kenya about challenges facing income generating women groups in informal settlements (Abala, 2013). The study employed structured questionnaires and Focus Group Discussions in data collection. The data obtained was analyzed by using Statistical Package for Social Sciences (SPSS) after cleaning, coding, and entering. The findings revealed that women groups in informal settlements have devised various income generating activities to improve their income, have got strict rules and regulations governing their operations and show a strong commitment to what they do in order to improve their socio-economic challenge.

In the study conducted in Tanzania about the challenges facing women entrepreneurs in accessing loans from commercial banks by Amalia, (2020) the primary data collection was done by using closed questionnaire whereby 120 respondents were involved to meet the objectives of the study. The researcher used multiple regression models with the support of SPSS software to analyze the data obtained. The findings show that four factors were observed to have an influence on accessibility to finance where interest rates, financial

literacy, and collateral were observed to have positive influence while loans term and condition factor had a negative impact to the dependent variable.

Research Methodology

The study adopted qualitative and quantitative approaches were by explanatory sequential design was used to direct the study, in which the researcher first gathers and analyzes quantitative data before correcting and evaluating narrative data that relate to the quantitative results (Creswell, 2012). The researcher utilized this design to gather quantitative data in the first sentence, and then used it to gather qualitative data to supplement the quantitative data in the second.

Businesswomen engaging in special loan applications to the Dodoma City Council were the study's target demographic. 100 businesswomen who participated in applying for special group loans in Dodoma city made up the study's sample size. Only 97 questionnaires were returned for analysis due to the presence of incorrect estimates, including missing questions.

The study employed simple random sampling and purposive sampling to produce a sample that accurately reflected the vast majority of the people in the relevant area that shared the same characteristics. Women in Dodoma city who were able to get special group loans were chosen through simple random sampling. In order to get a specific type of information from participants, the researcher employed maximum variation sampling (purposeful sampling), which involved formulating questions and choosing candidates from a wide range of applicants who were relevant to the study's topic (Creswell, 2012). Purposive sampling was utilized in this study to identify Dodoma city council members with specific knowledge about the special group loan to women. WEOs, Council Business Officers, and Community Development Officers are a few examples of these public servants.

This is a reference to methods used to obtain data that is physically analyzed in a research study (Johnson & Christensen, 2017). The two types of data are main and secondary. Interviews and surveys served as the study's primary data sources, with a secondary data source being a documentary evaluation.

As part of the questionnaire completing process, study participants were requested to supply personal information. Both open-ended and closed-ended questions were used in the study.

Unstructured interviews were employed in this study to allow the researcher and respondents to ask and answer questions at their own discretion while still in the field. By conducting unstructured interviews, the assurance of collecting information from government officials was attained. Asking the consent of the study's informants was the first step in the interviewing process. The interviewees were asked four questions, and the researcher was able to take notes in a notebook and record the audio using a smartphone. This allowed the process to be carried out in a very cordial way. Additionally, the researcher looks at a number of documents, including reports on community development, council business, and government policy.

Data analysis is the organization and interpretation of empirical data to provide context. Unlike quantitative research, qualitative studies start their data analysis during the data collection phase. The study used content analysis to analyze qualitative data. The researcher first paraphrased the qualitative data to prevent information duplication. To make sense, the information was arranged appropriately. After being analyzed and presented, quantitative data was supported by qualitative data. As an analytical tool for the study, SPSS software was utilized to evaluate quantitative data. Texts, charts, and tables were used to present the data after it had been coded. In this investigation, frequencies, percents, means, and standard deviation were calculated using only descriptive statistics.

Findings And Discussion

This section presents the findings and discussion about the challenges women have in obtaining special group loans from the Dodoma municipal council are examined in this study.

Business skills

The quantitative data acquired through open-ended questions showed that the majority of business women (N=73, 100%) identified a lack of business skills as a barrier to accessing special group loans. These findings suggest that women's lack of business abilities prevents them from recognizing their borrowing needs, which prevents them from obtaining special group loans. The capacity to do a business task successfully with specified performance and results within a specific time, material, financial, managing power or other types of resource is known as a business talent (Kolmar, 2021). For that fact, business women are not effective in determining their performance with the specific resources they have.

According to the quantitative data acquired through open-ended questions, the majority of business women (50.7%, N=37) identified inadequate information asymmetry as a problem they faced and a barrier to their ability to get specialized group loans. According to these findings, there is a greater probability for special group loans to be hard to obtain when there is an informational mismatch between the lenders and borrowers in the council.

According to the study, when one side to a transaction has access to more information than the other, there is inadequate information asymmetry. Due to the asymmetric information present in this transaction (borrowing), where the lender (government) is more knowledgeable about the service than the borrower (Bloomenthal, 2021). As a result, in this study, the government has more knowledge about special group loans than do businesswomen, which results in a lack of knowledge about the services available to businesswomen and a low rate of access to special group loans.

According to the quantitative data acquired through open-ended questions, the majority of business women (34.2%, N= 25) identified bureaucratic procedures as a difficulty they faced and a barrier to obtaining special group loans. These findings show that numerous bureaucratic procedures carried out by government employees from the first loan application stage to the final approval stage tire needy company women and consequently affect their inability to obtain special group loans. According to the study, bureaucracy is an organizational, governmental, or social system that has a hierarchical structure and intricate rules and regulations. Decision-making is slowed down by the systems and procedures that have been put in place (Banton, 2020). As a result, the government makes applying for a loan more difficult by enforcing procedures that are largely unnecessary. This slows down the decision-making process for loan applications.

Table 1: Challenges hindering women in accessing special group loans

Challenges	Responses		Percent of Cases
	N	Percent	
Bureaucracy	25	13.6%	34.2%
Business skills	73	39.7%	100.0%
Unrealistic objectives	24	13.0%	32.9%

Credit crunch	25	13.6%	34.2%
Poor information asymmetry	37	20.1%	50.7%
Total	184	100.0%	252.1%

Credit crunch

According to the quantitative data obtained through open-ended questions, the majority of business women (34.2%, N= 25) identified the credit crunch as a problem they faced and a barrier to their ability to get specialized group loans. These findings suggest that the credit crunch made it harder for business women to get larger loans, which contributed to a lack of services that were necessary. An economic situation where financial institutions restrict their lending activity or tighten the standards for receiving a loan, making loans less available, is known as a credit crunch, also known as a credit squeeze, credit tightening, or credit crisis. Due to the credit crunch in this study, which is the government's fault, business women have less access to specialized group loan

Unrealistic objectives

The quantitative data obtained through open-ended questions showed that the majority of business women (32.9%, N=24) identified unrealistic goals as a difficulty they faced and a barrier to obtaining specialized group loans. These findings suggest that not all of the group members who have applied for loans share the same borrowing goals. Everyone has their own aims, target, and output because when there is a misalignment of the objectives, business failure is close by. Because of this, it is unrealistic goals that prevent business women from accessing specialized group financing.

Poor information asymmetry

The quantitative findings gathered through open ended questions revealed that majority of business women (50.7%, N= 37) indicated poor information asymmetry as a challenge they encountered and hindering them to access special group loans. This results imply that the

mismatching of information between the borrowers and the lender in the council lead to the reduction of trustworthiness between them and thus increases the tendency of low access of special group loans. The study found that poor information asymmetry is when one party in a transaction is in possession of more information than the other. In this transaction (borrowing) lender can take advantage of borrowers because asymmetric information exists whereby the lender (government) has more knowledge of the service than the borrower (Bloomenthal, 2021). Therefore, in this study the government has more information about special group loans more than business women and thus lead to insufficient of information about the service to business women which lead to the low access of special group loans.

Bureaucracy

The quantitative findings gathered through open ended questions revealed that majority of business women (34.2%, N= 25) indicated bureaucratic procedures as a challenge they encountered and hindering them to access special group loans. These results imply that a lot of bureaucratic procedures which are conducted by government officials from the first stage to the last stage of loan application led to the exhaustion to among needful business women and thus influence the low access to the special group loans. The study noted that, bureaucracy is an administrative, government or social system with hierarchical structure and complex rules and regulations. The systems and process that are put in place effectively make the decision-making slow (Banton, 2020). Therefore, the government makes the process of accessing loan very slow due to the procedures which are most irrelevant and thus makes the decision-making of loan's application to be very slow

Conclusion And Recommendations

Conclusion

According to the study's findings, a bad loan system causes problems with loan distribution because most recipients move from one location to another without telling the appropriate authorities. Therefore, since the government offers this type of credit without requiring collateral or paying interest, once the beneficiary goes missing there is no way to get the money back. One barrier for business women to accessing special group financing is a lack of business expertise. Lack of business abilities prevents women from understanding their borrowing needs, which prevents them from obtaining special group loans. Because of this,

businesswomen find it difficult to assess their performance given the particular resources at hand. Additionally, there is a positive significant correlation between business skills and access to special group loans in the public sector; for every unit increase in business skills, access to special group loans increases by a specific percentage.

The following recommendations have been made to policymakers, government loan officials, businesswomen, and other special groups in Local Government Authority based on the study's results and conclusion.

- Businesswomen should invest in learning various business skills that will enable them to use and manage the loan successfully. Older businesspeople with relevant expertise can teach you the necessary abilities. Additionally, a variety of enterprises and organizations that offer training to SMEs and other types of businesses may be able to help them develop effective business skills.
- The reformation of special group loans should be facilitated by the decision-makers so that the loan system is appropriate and long-lasting. The policy should outline the sustainability environment in a way that encourages participation from both lenders and borrowers in developing an efficient lending system where the means and effects are anticipated and achieved at a predetermined point in time.
- Government loan officers should provide customer care during and after loan applications to the beneficiaries in accordance with their needs. Due to the beneficiaries' freedom to apply for loans without fear and their success in repaying them, this will enhance access to special group loans.

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Barriers to Effective Supply Chain Management Practices and Performance: Multi-sector Perspectives

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Abstract

The cohesive objective of supply chain management is to ensure timely delivery of the right quality and quantity of products at the least possible cost whilst maintaining the highest level of customer satisfaction. Every organisation is subjected to some barriers that moderate its practices and performance. This paper reviews the barriers to effective adoption of SCMPs and supply chain performance in different sectors of the economy. To have the latest set of data, the study considered peer-reviewed journal articles published between 2018-2022 with a focus on the barriers to SCMPs and SC performance. From these criteria, the author retrieved and reviewed 25 journal articles with focus in different types of industries. From the reviewed articles, the author identified and ranked 20 major barriers which impede the effective adoption of SCMPs and supply chain performance. Lack of coordination and trust along the SC, conflicting objectives, financial and human constraints, the bullwhip effects, lack of managers' commitment and awareness on the perceived benefits of SCMPs were spotted as the most barriers. The study asserts that the barriers to effective adoption of SCMPs and SC performance are almost the same across different sectors of the economy. To SC managers and stakeholders, the author recommends the need to review the present literature and extract the barriers and reap the full potential of enablers along their SC.

Keywords: SCMPs, Supply Chain, SC performance, barriers to SCMPs.

Introduction

In today's dynamic market forces, diversified technology and volatile socio-economic environments, local and global firms across different sectors of the economy have realised that sustainable supply chain management practices (SSCMPs) are important antecedents for improved performance. Moreover, increasing competition between the supply chains has

pressured companies and organisations to be aware of the perceived benefits of SSCMPs. It is important that all business firms and organisations plan, undertake and complete their activities along their supply chain (SC) through SSCMPs. The concept of supply chain refers to a network of organisations that are involved, through upstream and downstream linkages in the different processes and activities that produce value in the form of products and services in the hands of the ultimate customer (Vishwakarma et al., 2022; Nassor, 2020). SC network includes the supplier of raw materials, manufacturers, distributors, retailers and customers. On the other hand, SSCMPs are described as the company's or organisation's strategic and transparent efforts toward socio-economic and environmental goals and coordination of organisation processes throughout the supply chain (Jamwal et al., 2021; Xin et al., 2021). SSCMPs emphasise the best practices in outsourcing raw materials, production, storage and transportation to achieve and sustain both long-term and short-term economic and operational goals.

The ultimate goals of supply chain management (SCM) are to achieve high levels of customer service and flexibility, minimise inventory level and enhance timely delivery of better-quality products and services at cost-effective whilst increasing business profit. One of the vital determinants of SC performance and long-term competitive advantages is the ability of business firms and organisations to effectively adopt and embrace SSCMPs (Nazam et al., 2020; Farooque et al., 2019). SCM advocates for integrating and coordinating SC as one unit that synchronises its operations through SSCMPs. Effective SCMPs plan and enhance both internal and external SC processes of an organisation, streamline and design how SC activities will be structured and undertaken. Organisations adopt and embrace specific types of SCMPs depending on the nature of their activities and business needs. However, the most SSCMPs include but are not limited to enhancement of total quality management (TQM), compliance to environmental laws and protection (green procurement), elimination of non-value adding activities along the SC (lean supply chain), vendor-managed inventory (VMI) and hiring of experts from low-cost and high skilled third-party (outsourcing) (Mohseni et al., 2022; Mangla et al., 2018; Zayed and Yaseen, 2020; Israel, 2022). Nevertheless, zero inventory management approach (the just in time-JIT), flexibility and quick response to customers' needs (agile SC), adoption of electronic data interchange (EDI), efficient coordination and collaboration along the SC and use of direct distribution channel (cross-docking) form an integral part of SSCMPs (Nkwabi, 2019; Israel, 2022; Machado et al.,

2020). To effectively adopt the best SCMPs, managers must develop appropriate SC performance measures.

Effective SCMPs pave the way for timely deliveries, improved financial performances, greater customer satisfaction and building trust among suppliers along the SC of any organisation. In India for example, the country has revealed remarkable growth in automotive manufacturing industries like Honda, Ford and Toyota due to the effective adoption of SSCMPs such as TQM, lean production and green procurement at different levels of the organisation (Jamwal et al., 2021; Narayanan et al., 2019). The practice is almost the same in Japanese automotive industries where the automotive companies (Toyota) have improved their whole SCs performance through effective adoption of Kaizen philosophies which stress lean supply chain, TQM and cost reduction (Bwemelo, 2017; Georgise and Mindaye, 2020). SSCMPs also help an organisation build up a strong economy and competition with other firms and other SC in terms of cost-effectiveness, production and timely delivery of the right quality goods and services. In Bangladesh, the textile and apparel industries explicitly focus on SSCMPs as a result they have become one of the largest exporting sectors in Bangladesh with 84% of total exports (Karim et al., 2021). Moreover, in developing countries, over 200 firms collapse every year due to ineffective and lack of effective SCMP plans and SCM performance measures (Mangla et al., 2018; Karim et al., 2021). Global and local companies and organisations incorporate SSCMPs to achieve operational and strategic SC objectives. However, the underlying barriers hinder the initiatives.

The major problems that face multi-sector industries from effective adoption of SSCMPs are the lack of SC performance metrics, conflicting goals, human and financial constraints and lack of coordination, trust and collaboration among the SC stakeholders. In South Africa and India, Gomera and Mafini (2020), Narayanan et al (2019) and Jamwal et al (2021) identified human and financial constraints, lack of top management support and commitment as the main barriers to effective adoption of SSCMPs in automotive, manufacturing and food industries. Despite the various pieces of literature addressing the barriers to effective adoption of SCMPs, there exist a knowledge gap that addresses whether the barriers to SSCMPs and SC performance are the same across different sectors of the economy, and preferably, across different countries. Most of the reviewed literature address the barriers to effective SCMPs with a focus on a specific type of industry. Concerning this gap, this article documents and establish whether the barriers impeding effective adoption of SCMPs and SC performance are

the same across different sectors of the economy.

Methods

This is a literature review-based study which was conducted to identify the frequent and the most barriers impeding effective adoption and implementation of SCMPs and SC performance across different sectors of the economy. The study was conducted in three stages. Initially, a literature review was conducted to identify the studies which mostly cited the barriers to effective SCMPs and supply chain performance in various sectors of the economy. To have the latest set of data, the study included only journal articles published in the last five years (2018-2022) with focus on the barriers to the adoption of SCMPs and SC performance. Moreover, only peer-reviewed articles published in English scientific journals were included and considered for analysis. It is from this review criteria, that the study managed to retrieve and reviewed 25 articles from different sectors of the economy and different parts of the world (see table 1). Literature asserts that a sample size of no less than 12 items of literature is sufficient to extract the variables for analysis (Ali et al., 2019; Mashenene and Rumanyika, 2014). Out of the reviewed 25 articles, 3 articles had a focus on multi-industry, food industry (4), textile industry (4), manufacturing industry (6), automotive industry (2), SMEs (3), electronic Industry (1), healthcare industry (1) and Agro-based industry (1). Thus, the articles retrieved and reviewed under this study focused in nine (9) different sectors of the economy. Figure 1 presents the steps employed in retrieving and reviewing the literature for analysis.

The articles for review were extracted from different publishers and databases, including emerald, google scholar, Scopus and Taylor & Francis. The keyword search strategy was based on the relevance of the research variables. These were “barriers to SCM”, “SCM challenges”, “constraints to SCM”, “factors for successful SCM”, “SC performance practices” and “SC performance”. In the second stage, the author spotted about 20 barriers impeding sustainable SCMPs and supply chain performance in various sectors of the economy (see tables 2 and 3). The next step involved establishing a normalised weight for each barrier based on the number of citations before ranking to determine the most critical barriers. The normalised weight was established using frequency and percentages. Each barrier was counted and assigned a frequency based on its citation from the articles reviewed. The total frequencies for each barrier were divided by the total number of reviewed articles (N=25) before being multiplied by 100% to establish the normalised weight (equation 1). n

donates the total frequencies (citations) for each barrier. N is the total number of reviewed articles under the study (N=25). Despite having several studies on the barriers to sustainable supply chain management practices, this study through literature review was highly needed since it updates the existing studies of which most have been outdated (with more than 10 years since their publication) and integrates SCMPs impeding barriers across different sectors of the economy.

$$\text{Normalised Weight} = \frac{n}{N} \times 100\% \dots\dots\dots [1]$$

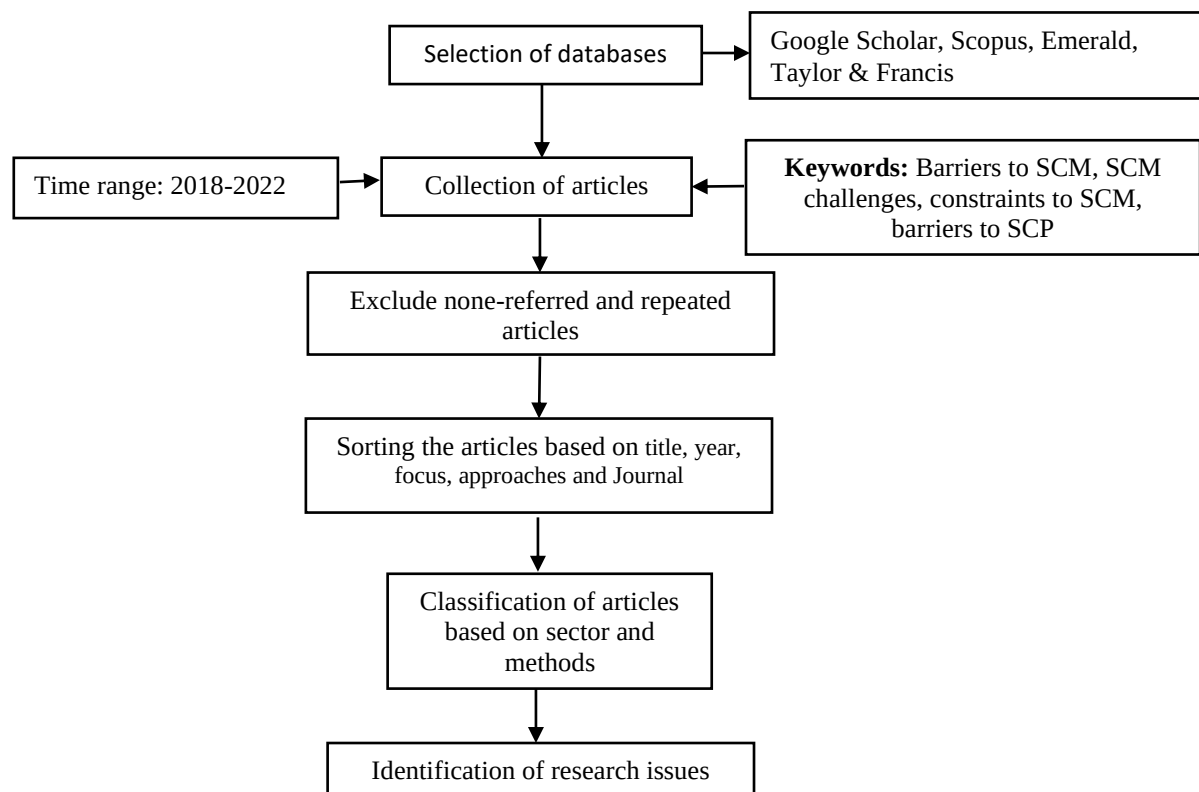


Figure 1: Review process

Table 1: Overview of empirical literature on the barriers to SCMPs and performance

SN.	Author(s)	Geography	Industry	Methods	Factors examined
1	Mohseni et al. (2022)	Iran	Food	Triangulation	Barriers and drivers
2	Menon and Ravi (2021)	India	Electronic	Interview	Barriers
3	Maryniak (2019)	Poland	Manufacturing	Survey	Barriers

4	Yazdi et al (2022)	-	Healthcare	Review	Barriers
5	Baig et al (2020)	Pakistan	Textile	Survey	Barriers
6	Mangla et al (2018)	Developing countries	Manufacturing	Triangulation	Barriers
7	Anis et al (2022)	Malaysian	Automotive	Survey	Barriers
8	Nazam et al. (2020)	Pakistan	Agro-industry	Survey	Barriers
9	Khan et al (2021)	Pakistan	Textiles	Interview	Barriers
10	Zayed and Yaseen (2020)	Egypt	Multi-industry	Interview	Barriers
11	Narayanan et al (2019)	India	Manufacturing	Survey	Barriers
12	Jamwal et al (2021)	India	Automotive	Survey	Barriers
13	Türk and Çelik (2019)	Turkey	SMEs suppliers	Triangulation	Barriers
14	Farooque et al (2019)	China	Food	Survey	Barriers
15	Ada et al (2021)	-	Food	Review	Barriers
16	Gomera and Mafini (2020)	South Africa	Food	Interview	Enablers and barriers
17	Nkwabi (2019)	Tanzania	SMEs	Triangulation	Constraints
18	Machado et al. (2021)	Brazil	SMEs	Triangulation	Barriers and enablers
19	Xin et al (2021)	China	Manufacturing	Survey	Challenges
20	Karim et al (2021)	Bangladesh	Textile	Survey	Challenges
21	Vishwakarma et al (2022)	India	Textile	Survey	Barriers
22	Xu and Zhao (2022)	China	Multi-industry	Survey	Factors
23	Leończuk (2021)	Poland	Multi-industry	Survey	Factors
24	Nassor (2020)	Tanzania	Manufacturing	Survey	Factors
25	Kissoka (2020)	Tanzania	Manufacturing	Survey	Challenges

Source: Literature Review (2022)

Findings

Descriptive analysis of the articles reviewed

Figures 2 and 3 are the distribution of publications amongst the journals from which the articles were retrieved and the annual publication outputs. Regarding the distribution of publications amongst journals (figure 2), the analysis shows about twenty-five (25) articles reviewed under this study were retrieved from seventeen (17) different international peer-review journals. The journal from which the articles were retrieved covered the scope related to supply chain management, operation, engineering and business management. Most of the journals have only one publication. The journal of production planning and control accounted for the highest number of articles (4 articles out of the reviewed 25 articles), followed by the journal of mathematical problem in engineering (3 articles. The journal of operations management and research, the journal sustainability and the cogent business management each contributed 2 articles to this review. The remaining twelve (12) journals published contributed one article each. Figure 2 illustrates the trends of publications among the articles reviewed per year from 2018 – 2022. There was a huge number of publications on the barriers to effective SCMP and performance in 2020 (7 articles) compared to 5 articles in 2019 and 2021. The year 2018 and 2022 had the lowest number of publications (4 articles each).

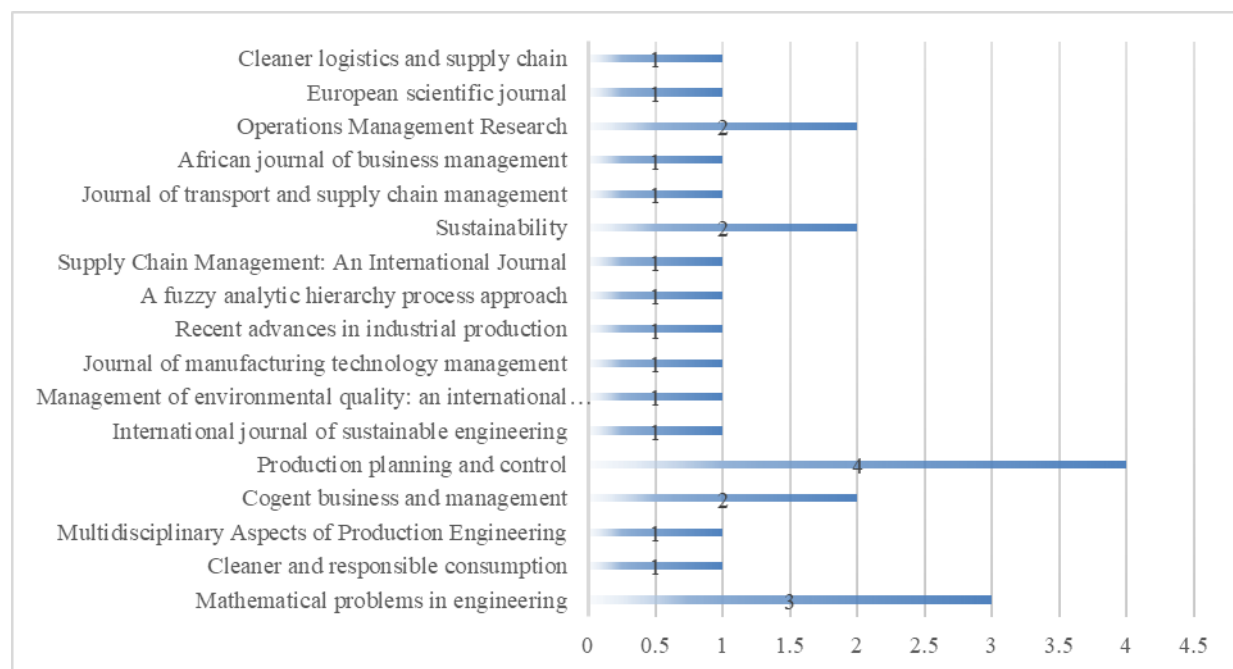


Figure 2: Distribution of publications amongst journals

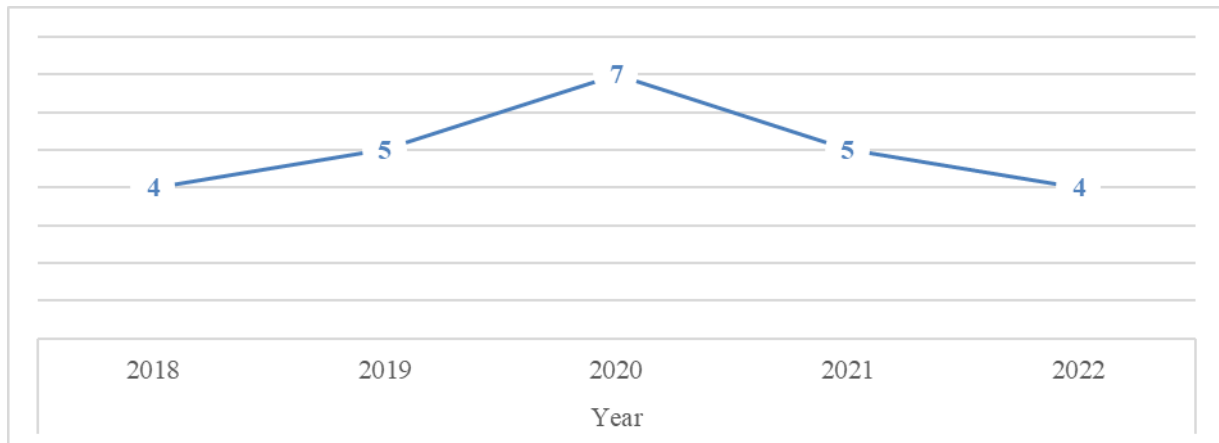


Figure 3: Distribution of publications per year (2018 – 2022, n = 25)

Table 2: Overview of Empirical Literature on Barriers to SCMPs and performance

Author(s)/Barriers	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
	CC	CO	FC	BE	LC	IS	LA	LC	PC	ICT	RT	LT	OF	CP	TF	IT	DF	PM	CL	TS
Mohseni et al. (2022)	x	x	x		x		x	x	x	x		x	x	x		x			x	x
Menon and Ravi (2021)	x	x	x	x	x	x				x				x				x		
Maryniak (2019)	x	x	x	x	x	x	x	x			x	x			x	x	x		x	
Yazdi et al (2022)		x		x		x				x	x	x	x	x			x	x		
Baig (2020)	x	x	x	x	x		x		x	x		x		x	x	x		x	x	x
Mangla et al (2018)	x	x		x	x	x	x				x		x				x			
Anis et al (2022)			x	x				x	x			x		x		x				
Nazam et al. (2020)	x	x	x	x			x				x		x					x	x	
Khan et al (2021)	x			x	x	x	x	x	x	x	x	x		x	x	x	x		x	x
Zayed and Yaseen (2020)		x	x									x			x					
Narayanan et al (2019)	x		x	x	x	x	x		x	x			x	x		x	x	x	x	
Jamwal et al (2021)	x	x	x			x		x		x	x			x	x			x		
Türk and Çelik			x	x	x			x	x											x

(2019)																			
Farooque et al (2019)	x	x		x	x	x	x		x	x			x				x		
Ada et al (2021)			x	x		x		x			x	x	x	x	x				x
Gomera and Mafini	x	x	x		x		x	x	x	x	x						x	x	
(2020)																			
Nkwabi (2019)	x		x	x		x	x	x				x	x	x		x			x
Machado et al. (2021)	x	x		x	x			x	x	x	x	x			x		x		x
Xin et al (2021)	x	x	x					x		x			x		x	x	x	x	x
Karim et al (2021)	x	x	x	x	x	x	x		x		x		x						
Vishwakarma et al	x		x		x		x		x			x			x	x	x		x
(2022)																			
Xu and Zhao (2022)	x	x	x	x	x	x		x	x		x	x	x	x		x			
Leończuk (2021)		x				x	x		x	x	x		x				x	x	x
Nassor (2020)	x	x		x	x	x		x	x			x		x	x				
Kissoka (2020)	x	x	x		x	x	x	x		x	x				x		x	x	x

Legends: ICC = Lack of coordination and collaborations, CO = Conflicting objectives, FC= Financial constraints, BE= Bullwhip effects, LS = Lack of support, IS= Inexperienced staff, LA = Lack of awareness, LC=Legal complexities, PC=Production capacity, ICT= Deficiencies in ICT use, RT=Resistance to change, LT=Lack of trust, OF=Operational facilities, CP= Capacity building, TF=Transport facilities, IT=Intensive competition, DM=Dynamic market forces, PM=Performance metrics, CL=Customer lifestyle, TS=Traditional SCM.

Barriers to effective SCMPs and SC performance

The study examined the barriers that impede different sectors of the economy from effective adoption of sustainable SCMPs and performance impact through an extensive literature review. The study reviewed about 25 journal articles from different databases with a focus on the barriers which impede different sectors toward effective adoption of SSCPs and supply chain performance. From the reviewed articles, the study summarises 20 barriers. Table 3 are the most SCMPs impeding barriers extracted and summarised from the literature. Table 4 presents the types of industries on which the reviewed literature had focused and their respective barriers facing the industry. The sign ‘x’ indicates that the barrier is a critical issue in the surveyed industries under the reviewed journal article. The findings show that all the spotted 20 barriers are common and critical issues to effective SCMPs and supply chain performance in all of the reviewed nine (9) sectors. This can be used to explain that the barriers impeding the adoption of SCMPs and supply chain performance are almost the same in different types of economic sectors and industries. Lack of coordination, collaboration and information sharing along the supply chain were cited by 76% of the reviewed literature as the most barriers effective adoption of SCMPs and supply chain performance in different industries. Collaborative and coordination practices (both vertical and horizontal integration along the SC) are essential tools for enhancing firms’ performance, however, they have been adopted in most business firms to a less extent due to one or more reasons (Mohseni et al., 2022; Baig et al., 2020).

Lack of trust among supply chain stakeholders (barriers 12), being cited by 52% of literature reviewed and ranked 10th in this study, has been regarded as one of the root causes of effective coordination, collaboration and adoption of SCMPs. Studies by Maryniak (2019) in Poland and Nkwabi (2019) in Tanzania revealed that different firms in different sectors of the economy give less consideration to collaborative supply chain, vertical and horizontal integration, information sharing and joint problem solving along their supply chain due to lack of trust among the supply chain stakeholders and fear of elimination, the practices which in turn impede overall supply chain performance. In India, Pakistan and Bangladesh, studies by Menon and Ravi (2021), Baig et al. (2020) and Karim et al (2021) connected the barriers to effective SCMPs and supply chain performance in electronic and textile industries with conflicting objectives among the supply chain actors which was ranked 2nd and cited by 72% of the reviewed literature and the distortion of supply chain information (bullwhip effects) which was ranked 4th and cited by 68% of the reviewed literature. Conflicting goals and the

problem of bullwhip amplify the problems of poor coordination, collaboration and sustainability of SCMPs due to lack of common goals and centralised information sharing system.

Table 3: Empirical findings on the barriers to effective SCMPs and performance

BNo.	Key issues	Number of Citations	Normalis ed weight (%)	Rankin gs
B1	Lack of coordination and collaboration along the SC	19	76	1
B2	Conflicting objectives among the supply chain actors	18	72	2
B3	Financial constraints and high operational costs	18	72	2
B4	The bullwhip effects along the supply chain	17	68	4
B5	Lack of support and commitment from top management	16	64	5
B6	Lack of expert staff in support of SSCPs and performance	15	60	6
B7	Lack of awareness on the perceived benefits of SSCPs	14	56	7
B8	Legal and regulatory complexities	14	56	7
B9	Limited production capacity	14	56	7
B10	Ineffective use of ICT systems	13	52	10
B11	Resistance to change among supply chain actors	13	52	10
B12	Lack of trust among supply chain stakeholders	13	52	10
B13	Inefficient and inadequate operational facilities	12	48	13
B14	Lack of support services and capacity building	12	48	13
B15	Inefficiencies in transportation facilities	12	48	13
B16	Intensive competition from other supply chains	11	44	16
B17	Dynamic market forces of demand and supply	11	44	16
B18	Lack of supply chain performance metrics	10	40	18
B19	Dynamic customer lifestyle and demand	10	40	18
B20	Traditional supply chain management system	9	36	20

Source: Literature review (2022)

Financial constraints were cited by 72% of the reviewed literature. This indicates a significant barrier of financial constraints to the effective adoption of SCMPs and the firm's performance. From the review, studies by Zayed and Yaseen (2020) and Gomera and Mafini (2020) in Egypt's and South Africa's industries asserted that the adoption, implementation and sustainability of SCMPs such as EDI have financial implications in terms of equipment and systems acquisition and operational expenses, the expenses which have never been met by most of the business firms, particularly the SMEs. Nevertheless, financial constraint is the root cause of a limited production capacity which was cited by 56% of the reviewed literature and inefficient and inadequate operational facilities which were cited by 48% of the reviewed literature. A firm's production capacity and sound operational facilities are necessarily needed to support and enhance SCMPs and supply chain performance. Conversely, limited production capacity and inefficient facilities affect cost-effectiveness, quality and timely delivery goals in different types of business firms and industries (Maryniak, 2019; Machado et al., 2021).

Lack of support and commitment from top management was ranked 5th and cited by 64% of the reviewed literature. Failures in the adoption, implementation and sustainability of SCMPs in different business firms are the ultimate impact of the lack of top management's commitment and dedication, which were also revealed by Narayanan et al. (2019) and Kissoka (2020) in Tanzania's and China's manufacturing firms. Management's support and commitment in terms of budget allocation, staff training and capacity building are imperative tools for the effective adoption of SCMPs such as TQM, lean supply chain, EDI and ERP for cost, quality and time performance of the supply chain. On the other hand, limited support and commitment from managers result in limited supply chain experts to support SCMPs and performance (barrier 6), lack of awareness of the perceived benefits of SCMPs (barrier 7) which originate from the lack of support services and capacity building program among staff (barrier14) which were respectively cited by 60%, 56% and 48% of the reviewed literature from multi-sector industries. SCMPs such as EDI, VMI, JIT, outsourcing and ERP have never been embraced in most of multi-sector industries due to their unperceived benefits (Türk and Çelik, 2019; Xin et al, 2021; Israel, 2022). Legal and regulatory complexities (barrier 8) have remained one of the critical issues that shape business firms to effective adoption of SCMPs and supply chain performance. About 56% of the reviewed literature cited and ranked unfavourable government trade policies the 7th among the barriers that impede different industries from effective adoption of SCMPs and supply chain performance. Studies by

Mangla et al. (2018) and Jamwal et al. (2021) found legal and regulatory complexities as the predominant barriers to effective adoption of SCMPs such as green procurement, EDI systems and supply chain integrations in developing countries' manufacturing and automotive industries.

Table 4: Empirical findings on the barriers to SCMPs in different industries

SN.	Barrier Code No.	Types of industries								
		FDI	ELC	MSI	HCI	TX	ATI	AGI	MFI	SME
		I s								
1	B1	x	x	x	x	x	x	x	x	x
2	B2	x	x	x	x	x	x	x	x	x
3	B3	x	x	x	x	x	x	x	x	x
4	B4	x	x	x	x	x	x	x	x	x
5	B5	x	x	x	x	x	x	x	x	x
6	B6	x	x	x	x	x	x	x	x	x
7	B7	x	x	x	x	x	x	x	x	x
8	B8	x	x	x	x	x	x	x	x	x
9	B9	x	x	x	x	x	x	x	x	x
10	B10	x	x	x	x	x	x	x	x	x
11	B11	x	x	x	x	x	x	x	x	x
12	B12	x	x	x	x	x	x	x	x	x
13	B13	x	x	x	x	x	x	x	x	x
14	B14	x	x	x	x	x	x	x	x	x
15	B15	x	x	x	x	x	x	x	x	x
16	B16	x	x	x	x	x	x	x	x	x
17	B17	x	x	x	x	x	x	x	x	x
18	B18	x	x	x	x	x	x	x	x	x
19	B19	x	x	x	x	x	x	x	x	x
20	B20	x	x	x	x	x	x	x	x	x

Legends: FDI – Food industry, ELC – Electronic industry, MSI – Multi-sector industry, HCI – Healthcare industry, TXI = Textile industry, ATI = Automotive industry, AGI = Agro-based industry, MFI = Manufacturing industry, SMEs = Small and medium-sized enterprises

Source: Literature review (2022).

The study also found ineffective use of ICT systems as one of the barriers to the effective adoption of SCMPs and supply chain performance. It was ranked 10th and cited by 52% of the literature reviewed. ICT systems such as e-procurement, e-supply chain, EDI and e-commerce are an integral part of SSCMPs. Many business firms in different sectors have not adopted ICT in their business operations. In developing countries, the barrier is amplified by limited ICT infrastructures, experts and a lack of supportive ICT policies (Mangla et al., 2018; Khan et al., 2021; Kissoka, 2020). Moreover, the adoption of ICT systems and transition to modern supply chain practices from traditional ones face resistance from various supply chain actors who might not be ready to take the transition, which was cited by 52% of the literature reviewed. Resistance to change from supply chain stakeholders make business firms constantly embrace traditional supply chain management systems and practices. Another barrier that influences SCMPs and firms' performance is transportation and distribution systems (barrier 15). Inefficiencies in transportation and distribution of goods were ranked 13th and cited by 48% of the reviewed literature as one of the factors that adversely affect supply chain performance and effective adoption of SCMPs. Inefficient transportation and distribution facilities are often expensive, less flexible and result in delivery delays (Xin et al., 2021; Zayed and Yaseen, 2020; Ada et al., 2021).

The other fundamental barrier that impedes SCMPs and supply chain performance is intense competition from other supply chains (barrier 16) followed by dynamic market forces (barrier 17). Literature asserts that today's competition is no longer between individual business firms, rather it is between local and global supply chains (Xu and Zhao, 2022; Leończuk, 2021). Increasing social, technological, economic, environmental changes and competition are becoming critical barriers to effective SCMPs and supply chain performance in Chinese and Iranian manufacturing and food industries (Farooque et al., 2019; Xin et al., 2021; Mohseni et al., 2022). The barrier is more acute in Malaysia's and India's automotive industries due to dynamic customer demand and lifestyle (Anis et al., 2022; Jamwal et al., 2021) which is ranked 19th in this study and cited by 40% of the reviewed literature. Lack of supply chain performance metrics was also found to be one of the most influencing barriers to SCMPs and their performance across different industries which is denoted by 40% of reviewed literature. The lack of evaluation standards makes it difficult to measure and quantify the suitability of SCMPs and their impact on supply chain performance. Studies by Nazam et al. (2020), Yazdi et al. (2022) and Menon and Ravi (2021) found a lack of uniformity in evaluating the suitability and sustainability firm's practices and performance as the critical barrier to

effective adoption of SCMPs and supply chain performance in electronic, healthcare and agro-based industries.

Conclusion and managerial implications

The purpose of this paper was to identify the barriers that impede the effective adoption of SCMPs and firms' supply chain performance through an extensive literature review across different sectors of the economy. The study retrieved and review 25 journal articles from different databases in local and global contexts with a focus on the barriers to SCMPs and supply chain performance. The reviewed articles had a focus and were conducted in nine (9) industries (see table 2). From the review, the study found and summarised 20 barriers that significantly impede the successful adoption of SCMPs and supply chain performance in different sectors of the economy. Among others, the study spotted and rated lack of coordination and collaborations along the SC, conflicting objectives among the supply chain actors, financial constraints, the bullwhip effects, lack of management's commitment and support, lack of experts in support of SCMPs and lack of awareness on the perceived benefits of SCMPs as the most and common barriers to effective adoption of SCMPs and supply chain performance in different sectors of the economy. The study asserts that the barriers to effective adoption of SCMPs and supply chain performance of business firms are almost the same across different sectors of the economy (see table 4). The results of this study give better insights to policymakers and firm managers to re-think and reform their operational, strategic and tactical business strategies and practices toward defective adoption of SCMPs and supply chain performance. This can be enhanced through capacity building and a centralised information sharing system on the best SCMPs and their perceived benefits across all the supply chain stakeholders and actors. This will inculcate a sense of total involvement in the adoption of SCMPs and enhance SC performance.

Contributions, limitations and suggestions for further studies

This study enriches literature that addresses and documents the barriers impeding SCMPs and supply chain performance. While previous studies focus on addressing the barriers to sustainable SCMPs and supply chain management performance in a specific industry, this study reviewed and documents the barriers to the effective adoption of SCMPs across different sectors of the economy. Therefore, the study is of novel contribution to the knowledge which updates scholars and researchers on the existing literature regarding the barriers to effective adoption of SCMPs and supply chain performance. The major limitation

of this study is that it is confined to a literature review. The study was unable to explore the contemporary barriers impeding the adoption of SCMPs and supply chain performance. Moreover, the reviewed literature focused on nine (9) sectors. The author could not find articles addressing the same variables under the study from other sectors of the economy. From this base, the author recommends future studies be carried out by using survey or interview approaches. The author further recommends future studies to be carried out in fishing and agricultural supply chains which revealed inadequate literature on the barrier to effective adoption of SCMPs across different countries. This will enrich the literature with the contemporary issues impeding the sustainability of supply chain management practices and performance across different sectors of the business economy.

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Influence of Electronic record access on Public Procurement Act Compliance in Tanzania.

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Abstract:

The purpose of this study was to analyze the influence of electronic records keeping on compliance to Public Procurement Act in Tanzania. The study involved 158 respondents from 3 sampled procuring entities (Public Procurement Regulatory Authority-PPRA, National Health Insurance Fund-NHIF, and National Electoral Commission-NEC) in Dodoma. Judgmental sampling procedure was involved to select samples in this study. Data were collected by using questionnaire, interview and secondary sources. In the part of analysis, regression was applied in this study. This study revealed that e-records access is the key variable that positive influences compliance to Public Procurement Act in Tanzania. This means that compliance to Public Procurement Act increase, when e-records access increases. Therefore, in any public entities, for the compliance to public procurement act should implement highly e-records access in the effective electronic records keeping.

Key words: Electronic records keeping, Compliance, Public Procurement Act

Introduction

Strong developments in the creation of systems, innovations, and technologies, including information and communication technology (ICT), have been made throughout the previous three decades (Eligi & Mwantimwa, 2017). ICT is being embraced by governments worldwide as a means of facilitating the delivery of rapid and responsive services through e-government (Moahi, Rathapo, & Sebina, 2017). ICT adoption has significantly impacted how business is conducted as well as how data are created, accessed, shared, used, stored, and

disposed of (Newa, 2017). Records management techniques turned a new page when organizations switched from keeping paper records manually in the 1980s to keeping electronic records in the early 1990s. Two significant trends in the field of document and content management came together during such shifts. First, as more records are created in electronic format and paper-based records are converted to electronic format, the number of electronic records is continuing to expand rapidly. The second trend is the expansion of statutory requirements, laws, and supporting corporate practices required to keep records under control and adhere to laws (Moahi *et al.* 2017).

In a similar vein, the Tanzania electronic procurement system is currently being used by numerous Tanzanian public institutions to manage their procurement process electronically (PPA, 2016). A major structural change brought about by TANePS is the acceptance of electronic records by many public organizations. The requirement to improve compliance with the public procurement laws is what is driving these emerging developments in public procurement (Mukred *et al.* 2019). Although the government has made significant efforts to promote the importance of electronic records keeping, the documents are inadequately maintained electronically (Kajimbwa, 2018). Not just in Tanzania but also other developing countries have been confronted with this problem. For example, in Kenya the current methods for keeping electronic records in support of procurement compliance are insufficient (Kamatula, 2018; Ambira, Kemoni & Ngulube, 2019). According to Asogwa (2012), keeping records has not been given much importance in developing countries. Electronic record keeping is one of the legal requirements that an organization has to comply (Chachage & Ngulube, 2006). According to Matto and Athumani (2018), the majority of Tanzanian public organizations are not in compliance with PPA 2011 regarding electronic records. Mohamed *et al.* (2018) stated that the procuring entities should set up reliable records management systems so as to increase the openness and accountability of the public procurement process. Worse still, many studies have overlooked to conduct research on this aspect of electronic record keeping in the context of developing countries. Therefore, this study tries to analyze the influence of electronic records keeping on compliance to Public Procurement Act in Tanzania.

Literature Review

E-record access is defined as the appropriate opportunity, method of finding, accessing, or retrieving information in the international standard for records management through online (ISO 15489-1: 2001). Records access and use in this study refers to use, retrieval, and dissemination. After documents are moved to the archives, according to Diamond (2015), they must be processed, preserved, and made available as sources of data or proof. The physical and logical control of records is made possible by a well-managed procurement records management system, which also guards against unauthorized access, tampering, loss, misplacement, and destruction of papers (Mnjama & Wamukoya, 2004). Duranti (2010) asserts that e-record-keeping processes must be addressed in order to have meaningful procurement systems. Records are necessary for accountability and efficient performance in addition to being a regulatory requirement. According to Obura (2011), in order to satisfy the requirements of corporate accountability and compliance with procurement law, regulations, and policies, procuring organizations must maintain records of their decisions, activities, and transactions. Furthermore, according to Akporhonor & Iwhiwhu (2007), descriptions and arrangements in an archive context not only provide correct categorization of the records but also make it possible for rapid and simple access to the records when needed. This demonstrates that efficient record access and usage improves compliance with the public procurement laws and is crucial for guaranteeing transparency and integrity in procurement and financial management.

Research Hypotheses

H₀: There is no significant relationship between e-records access and compliance to Public Procurement Act.

H₁: There is significant relationship between e-records access and compliance to Public Procurement Act.

Methodology

The study used a cross section design. Additionally, the mixed approach was used to enable the application of multiple approaches to data collection on the same topic and the generation of qualitative data characterizing the respondents' viewpoints. As a directed tool to assist the researcher in including the selected PEs in the sample size for data collection, the study used

the judgmental sampling technique to choose sampled PEs from the target population (Tesha, 2020). Because the judgmental sampling technique includes the inclusion of pertinent units of inquiry, it is time and resource efficient during the investigation. Data were collected through questionnaire, interview, and secondary sources. Sample size for the study was 165, but only 158 respondents were responded well in the questionnaire. The study applied regression analysis for analysis of the data to test the relationship between e-record access and PPA compliance.

Results

Statistics and Data Analysis

This section was completed in order to determine the relationship between the independent and dependent variables. The primary goal of this study was to assess how well public entities comply with PPA in relation to the electronic records keeping. On a scale of 1 to 5, compliance to PPA was analyzed based on e-records access. The statistical relationship between the independent and the dependent variable was established using regression analysis.

E-records Access and Compliance to Public Procurement Act

Table 1 reveals that retrieve has the highest B coefficient value, which is 0.822, or 82.2%. This suggests that the retrieve to electronic maintenance is the factor that contributes most significantly and uniquely to understanding the dependent variable, which is compliance with the public procurement act. But, the relationship between these two variables is statistically significant because the P-value is less than 5% (0.05), or 0.000. Also, the results show that use, and disseminations have a positive contribution in explaining the dependent variable which is compliance to the public procurement act, and its contribution are statistically significant, according to regression analysis, since (B-value is 0.443, P-values is 0.000; and B-value is 0.530, P-values is 0.000), which are less than 0.05.

Table 1 Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.533	.423		1.990	.000
Use	.443	.103	.304	1.113	.000
Retrieve	.822	.132	.450	2.799	.000
Dissemination	.530	.129	.367	3.872	.000

a. Dependent Variable: Compliance to Public Procurement Act

Source: Field Data (2022)

Discussions

The researcher confirmed that access to electronic records has an influence on public entities' compliance with the public procurement act. Regression analysis, as shown in table 1, e-records access has positive significant unique contributor in explaining the dependent variable, compliance with the public procurement act based on the use, retrieve, and dissemination. This suggests that descriptions and arrangements in an archival setting not only guarantee appropriate organization of the records but also make the documents accessible quickly and easily when needed. This demonstrates that efficient record access and usage is crucial for guaranteeing compliance with the public procurement laws and transparency and objectivity in financial management. To meet the expectations of corporate accountability and compliance with procurement law, regulations, and policies, Obura (2011) asserts that procuring authorities must preserve records of their choices, operations, and transactions.

A unit increase in access to electronic records will also result in an increase of compliance with the Public Procurement Act, according to the results in Table 1. This indicates that the records are processed, preserved, and made available as a source of information or evidence once they have been moved to the archives. The physical and logical control of records is made possible by a well-managed procurement records management system, which also guards against illegal access, tampering, loss, misplacement, and destruction of paperwork.

The presented results concur with Diamond (2015) who claimed that without addressing e-record-keeping procedures, significant procurement systems are impossible. Records are necessary for accountability and successful performance in addition to being a regulatory requirement.

Additionally, the study revealed that senior management staff cooperates with and supports electronic record keeping procedures. This suggests that in order for administrations to fulfill their obligations in this case, with regard to transparency they must create electronic record systems that ensure the proper handling of records and information.

One of the respondents stated during a face-to-face interview that:

Their organization is integrating internal administration and information disclosure management with electronic records in order to move beyond the conventional, administrative management-related perspective and embrace a record's full lifecycle, including its creation or incorporation as well as its classification, description, storage, conservation, access, destruction, use, and traceability (Key informant 1, 2022)

This importance is the backbone of a transparent and responsible administration, it was further stated. According to Pereyra (2013), the records management system must therefore make it possible for authentic documents to be enabled, necessitating the need for public agencies to be able to vouch for the accuracy of the information they give. According to Moyano and Collado, (2015) it must also be interoperable with both the transparency portals provided by each public agency and with the records management systems of other public administrations.

Conclusion and Area for Further Study

After considering the results from both quantitative and qualitative data findings provides a meaningful intuition of the relationship between e-records access and compliance to Public Procurement Act. The conclusion is that increased e-records access improves compliance to public procurement act in Tanzania. According to the study, e-records access has a strong positive influence on Public Procurement Act compliance in public organizations in Tanzania was accepted by this study on e-records access based on the uses, retrieve, and

disseminations. Therefore, in any public entities, for the compliance to public procurement act should implement highly e-records access in the effective electronic records keeping.

Furthermore, this paper recommended that there is still opportunity for more studies in the future since only public entities in the Dodoma region are the focus of the paper; the identical paper might be done on another region of the United Republic of Tanzania.

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Effects Of Procurement Procedure on Procurement Efficiency: A Case of The Selected Local Government Authorities In Dodoma Region

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Abstract

The existing literature and theories such as system theory, institution theory and resource-based view demonstrates possibilities of organization resources, ICT application and procurement procedures to affect procurement efficiency in public sector. This work explored the effect of procurement procedures on purchasing efficiency in selected local government authorities in Dodoma Region. This study used a cross-sectional design where data was collected from Dodoma City Council, Kondoa and Chamwino district Councils The study confirmed the hypothetically presented case.

Keywords: Procurement procedures, Procurement efficiency, Local Government Authorities.

Introduction

Public procurement as an administration tool is not only concerned with the purchase of the needed goods and services, but also, is an important vehicle for poverty alleviation and job creation. The function too, is linked with advancing sustainability and achieving socio-economic benefits and development outcomes (Ali, 2020).

Globally, public procurement has gained considerable attention in the minimization of economic inequality as addressed in the United Nations sustainable development outcomes. The inequality, social injustice and inbalance of resource ownership are among the issues to which governments apply public procurement through setting procedures and process to address sound economic welfare of the people (Igomole, 2019).

In as far as the economic statistics are concerned, public procurement forms a significant part of GDP that averaged to 12% (Bashaka & Mugabira 2008, OECD, 2017). In 2019, Tanzania procurement consumes around 70% of the Government budget (PPRA year?). Managing such a massive outlay of procurement has been a challenging task for most of the procurement

practitioners. Apart from other existing challenges which include challenges associated with procurement efficiency, regulation as well as enforcement programs (Rasheed, 2017). Such encounters pose a stumbling block to the attainment of efficient public sector procurement. Furthermore, such procurement challenges have led to the failure of attaining the desired goal of extending public services and goods for national development (Masudin, et al. 2018).

The concept of efficiency in procurement has been discussed by a number of research works in different angles and in different geographical contexts (Chollete et al. 2019; Christostom, 2012; Balazis and Kitti, 2021; Grandia, 2018; Patrucco et al, 2019; Wibowo, 2019). Of these studies, majority of them were conducted in developed countries (Chollete et al. 2019; Balazis and Kitti, 2021; Grandia, 2018; Patrucco et al, 2019; Wibowo, 2019) and a few of them covered Africa (Christostom, 2012; Eyaa & Oluka, 2011; Changelima et al., 2020; Kioko and Were, 2014). The current study aimed at focusing Africa with particular to Tanzania

In Tanzania, the Local government authorities were established as an important part of the Government that implement government programs to the grassroots. In doing that, such establishments do procure inputs and hence being involved in implementing public procurement roles in the country.

Empirical Literature Review

Grandia (2018) studied public procurement in Europe. Over 250,000 public authorities in the European Union spend around 14% of GDP on goods, services, and construction. Being the EU's largest spender permits public bodies to use procurement to exert influence on particular policy goals.

Changelima et al. (2020) on their study aimed at examining procurement planning as a strategic tool for public procurement effectiveness noted that the survival and development of procuring entities, as well as the nation as a whole, are dependent on the public procurement function. Based on this, this study is aimed at looking into the impact of procurement procedures such as planning, supplier selection, and awards on the success of public procurement in Dodoma, Tanzania, based on the experiences of a few local government authorities.

A study by Wibowo (2019) on the role of procurement professionalization on improving

efficiency of public procurement noted that procurement professionals are key to addressing efficiency issues. Through enhanced skills procurement professionals will ensure timely availability of goods and services as planned before. With this notion at hand and considering procurement professionals/experts as part of organization resources the study opted to include resources as a valuable determinant of public procurement efficiency in public organizations.

Furthermore, a study by Kioko and Were (2014) focusing on factors affecting efficiency in public institutions in Kenya, using 40 respondents argued that staff competencies, legal framework, institution culture and information communication technology positively and significantly affects the efficiency of procurement function. Building on this, this study also is aimed at examining whether procurement procedures could have a positive effect on the efficiency of procurement in public sector especially local government authorities.

Resource-Based View Theory

RBV is an economic theory that claims that a firm's success is determined by the resources and capabilities it controls (Barney & Hesterly, 2008). A resource is a relatively observable, tradable asset that helps a company's market position by increasing customer value or lowering costs (or both); and a capability refers to a company's ability to complete tasks that lead to higher economic performance by increasing value, decreasing cost, or both (Walker et al., 2004.)

Resource Based View (RBV) assumes that the success of the organization lies within the organization itself, or to be exact in its valuable, intangible and not perfectly imitable resources (VRIO condition) allowing it to achieve a sustainable competitive advantage (Barney, Clark 2007). Based on the resource based view these resources will lead to early effectiveness to the procurement process and if these resources are inimitable, non-substitutable and immobile it will lead to long term effectiveness to the process (Barney, 1991).

Local Government Authorities possess competent human resource that is conversant with procurement related issues that include the established procurement procedures. In that, the cited competence is among the ones linked with efficiency in procurement.

Conceptual framework

Based on theoretical and empirical literature review and the developed hypotheses a

conceptual model as shown on Figure 1 was developed. Under the model procurement efficiency is identified as a dependent variable that is being explained by three independent variables namely; Negotiation and Award of Contract, Request For and Submission of Tenders and Technical Evaluation. The figure below shows the cause effect relationship between Procurement procedures and procurement efficiency in the presence of control variables that influence the independent variables. This model was tested based on the methodology identified in the next section and data collected from local government authorities in Dodoma region.

Independent Variables

Dependent Variable

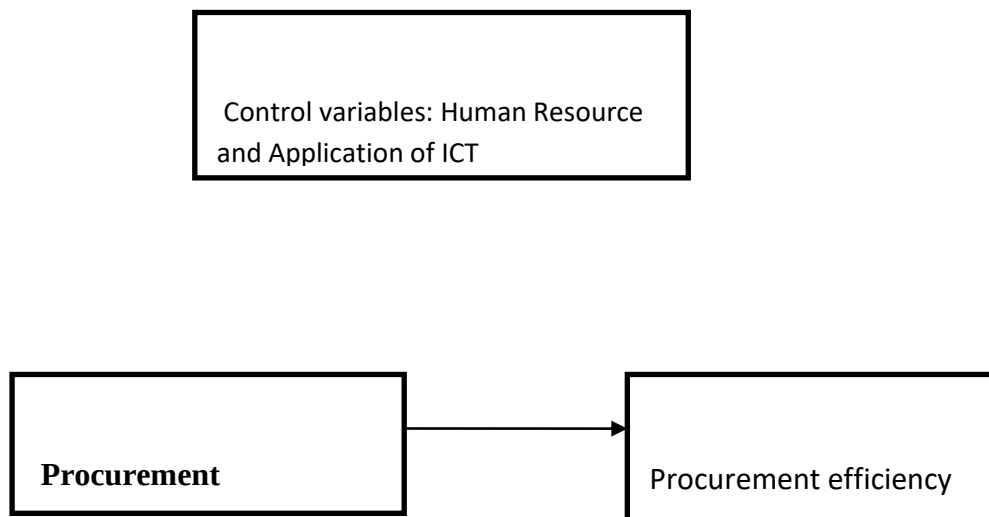


Figure 5: Conceptual Model

Source: Reviewed Literature by a Researcher

Research Methodology

Research Design

This study adopted a cross-sectional design where the researcher gathered information related to determinants of public procurement efficiency at one point in time. This was a suitable design to be used since the study is a population-based survey and it was relatively faster and cheaper and less time-consuming hence allowing the researcher to easily collect data.

Area of the Study

The study was conducted in Dodoma Region. The region is selected because as the Nation's Capital City with where the legislative assembly, it continues to experience poor planning, corruption, low knowledge on laws and regulations and adequate resources. Dodoma is the 8th largest region by area after Manyara Region. Basing on this fact, the researcher was convinced that relevant information would be obtained.

At its inception the Region consisted of the three rural Districts of Dodoma, Kondoa and Mpwapwa. Later on, the Urban District of Dodoma made up the fourth District. In 1995 Mpwapwa District was divided into two districts namely Kongwa and Mpwapwa which made up the fifth district in the Region.

In 2007 Dodoma Rural District was divided into two districts of Bahi and Chamwino. This made up the sixth District, In 2012 Kondoa District was Divided into two Districts namely Kondoa and Chemba which finally made the Region to have Seven Districts. Currently, Dodoma as the region hosting the capital city has the following districts; Bahi District, Chamwino District, Chemba District, Dodoma Municipal, Kondoa District, Kongwa District, Mpwapwa District. Based on the above information, Dodoma, Chamwino and Kondoa were rendered an ideal area to carry out a study on the determinants of public procurement efficiency in selected local government authorities since they are the biggest and most prominent districts in Dodoma region and procurement activities are carried out on large scale with available procurement procedures in place but with no clear literature on their effect on procurement efficiency.

Sampling procedures

The study applied both probability and non-probability sampling procedures in selecting the study sample. Purposive sampling was employed to select LGAs in Dodoma region and key informants. The key informants included the heads of the procurement department. Purposive sampling was used because it provides an opportunity to focus on particular characteristics of the population that were of interest, which best enabled the researcher to answer their research questions. The distribution of the selected sample from each LGA is presented in Table 1. Under probability sampling procedure, the sample was selected from a population, based on the principle of randomization, that is, random selection or chance.

Table 15: Distribution of Sample size in the selected LGAs

LGAs	Population	Total Sample	Sampling technique
Dodoma City Council	200	33	Purposive sampling
Kondoa district	150	25	Purposive sampling
Chamwino district	150	25	Purposive sampling
Total	500	83	

Source: Estimations by the Researcher (2022)

Data Analysis Methods

The data collected was analysed based on the specific objective and the study design. The data analysis process included; editing, coding as well as cleaning (Nyakibari, 2020). Both descriptive and inferential statistics were computed with the aid of the Statistical Package for Social Sciences (SPSS).

Qualitative data

Qualitative data collected from the interviews and focus group discussion was analysed using content analysis where different themes were developed based on theories and literature

Quantitative data

To assess the determinants of efficiency procurement in selected local government authorities in the Dodoma region, the multiple regression model was used to model the relationship between one response variable and more than one regressor variable. The regression model as indicated by equation 1 was used for:

The Multiple regression model was used to examine the relationship between the available procurement procedures and public procurement efficiency in selected local government authorities in Dodoma Region. The below regression model shown by equation will be used:

$$Y = \beta_0 + \beta_1 \text{NeAwCo} + \beta_2 \text{ReSuTe} + \beta_3 \text{TeEv} + \epsilon \dots\dots\dots (3)$$

Whereby:

Y=Procurement efficiency

NeAwCo=Negotiation and Award of Contract

ReSuTe=Request For and Submission of Tenders

TeV=Technical Evaluation

and ϵ = error term.

At the end of the day, you have to use your regression model to test all the variables at once (all variables in a single equation to obtain 'R')

Diagnostic Tests

Multicollinearity test

The general assumption in regression model is that predictor variables used in the study should be independent of each other. Multicollinearity exist when there are high linear relationships between two or more explanatory variables, going up against the assumption that explanatory variables in a study should be independent of each other (Alabi, Ayinde, Babalola, Bello and Okon, 2020). The Variance Inflation Factor was used whereby if the VIF value is between 1 and 10 indicate no multicollinearity but if its below 1 and above 10 it means that multicollinearity exists (Velnampy et al. 2014). Based on the coefficients output relating to collinearity, the VIF for all of the independent variables were between 1 and 10 implying that no multicollinearity was detected.

Table 16: Multicollinearity test results for the study variables

Variable	Tolerance	VIF
Negotiation and Award of Contract	0.556	1.716
Request For and Submission of Tenders	0.410	2.421
Technical Evaluation	0.400	2.104

Test for Heteroscedasticity

Heteroscedasticity is a major concern in the application of regression analysis, which always occurs in cross sectional data, when the variances of the error terms are no longer constant, it is often investigated with the ideology of relationship between error terms and exogenous variables (Alabi, Ayinde, Babalola, Bello and Okon, 2020). Violation of this assumption makes coefficient estimates less precise increasing the probability that the estimates are not a

true representation of the population. The study used Levene's test to detect homogeneity and where the value was above 0.05 it meant that the populations were independent observations (Okon et al., 2020). All the study variables used had a value above 0.05 which indicates that heteroscedasticity was not violated.

Table 17: Heteroscedasticity test results for the study variables

Variable	Levene Statistic	Sig.
Negotiation and Award of Contract	2.154	0.631
Request For and Submission of Tenders	1.354	0.125
Technical Evaluation	1.371	0.638

Validity and Reliability

Validity

The validity of the study observes whether the quality and instruments of the study are accurate, correct, true, meaningful and right (Kothari, 2014). To ensure validity, interview questions will be pre-tested to check their functionality. If the tools will bring the intended results, then they will be considered valid for data collection.

Reliability

Reliability means consistency and stability of information and that if research is conducted under the same circumstances' findings were replicated (Vesna *et al.*, 2017). Reliability will be analysed using Cronbach's alpha (α) as it predicts the variables. The usefulness of this technique is in ensuring internal consistency and group homogeneity (Vesna *et al.*, 2017). The generally agreed-upon lower limit for Cronbach's α is 0.70.

A reliability coefficient below 0.7 was poor and unacceptable. A low value of alpha can be due to a low number of questions, poor interrelatedness between items or heterogeneous constructs such values were rejected while alpha values between 0.7 and above were accepted as reliable. In this study the computed Cronbach alpha values for the dependent and

independent variables were above 0.70 which indicates that the items under each variable were consistent as shown below in Table 4.

Table 18: Reliability test results

Reliability Analysis	Cronbach's Alpha
Negotiation and Award of Contract	0.742
Request For and Submission of Tenders	0.736
Technical Evaluation	0.799
Overall Cronbach's Alpha	0.759

Research Ethical Considerations

The study abided by rules and regulations as per the College of Business Education (CBE) research ethics committee for conducting the research. The identity of respondents was not exposed in the data collection instruments so that the respondents remain anonymous. Also, confidentiality was maintained at all times as collected data served only academic purpose of the researcher. The researcher ensured that respondents were free from physical and psychological harm to share or not to share what they know if they so want to.

Findings And Discussion

Overview

This chapter provides a detailed analysis of collected data from fieldwork. The chapter includes the demographic profile of respondents. Furthermore, an in-depth discussion is made purposely to correlate the obtained data from different respondents. The discussion of the findings is based on specific objectives such as; to examine the relationship between ICT application and procurement efficiency in selected local government authorities in Dodoma Region, to examine the relationship between the extent of available human resources and procurement efficiency in selected local government authorities in Dodoma Region and finally to examine the relationship between the available procurement procedures and procurement efficiency in selected local government authorities in Dodoma Region.

The relationship between the available procurement procedures and procurement efficiency in selected local government authorities in Dodoma Region.

The relationship between the available procurement procedures and public procurement efficiency in selected local government authorities in Dodoma Region was tested using multiple linear regression model against three independent variables under procurement procedures namely; negotiation and award of contract, request for and submission of tenders and finally technical evaluation.

Table 19: Model Summary

Model	R	R²	Adjusted R²	Std.Error of the estimate
1	0.990	0.981	0.981	0.134

a. Predictors: (Constant) Negotiation and Award of Contract, Request For and Submission of Tenders and Technical Evaluation

A multiple regression analysis was conducted to find out whether procurement procedures through its sub independent variables; negotiation and award of contract, request for and submission of tenders and finally technical evaluation could significantly public procurement efficiency. The results of the regression, in table 14 above indicate that the model accounted for 98.1% of the variance in dependent variable. In addition, the regression also indicated that the model was a statistically significant predictor of public procurement efficiency ($p = 0.000$). This implies that the remaining 1.9% of the variation in public procurement efficiency is explained by variables that the study didn't capture. The findings concur with Carr and Pearson (2002) who noted that procurement practices positively impact an organization's financial performance, the success of a new product depends on procurement and supplier involvement. Most organizations use a substantial amount of their income in procurement and therefore recognize the importance of strategic procurement practices

Table 20: Analysis of Variance

Model	Sum Squares	of Df	Mean Square	F	Sig.
Regression	71.431	6	16.952	18.402	.000 ^b
Residual	46.600	69	.018		

a. Dependent Variables: Public procurement efficiency

b. Predictors: (Constant) Negotiation and Award of Contract, Request For and Submission of Tenders and Technical Evaluation

The results in Table 15 above indicate that the regression model was significant in predicting how Negotiation and Award of Contract, Request For and Submission of Tenders and Technical Evaluation affect the public procurement efficiency of selected local government authorities in Dodoma region because the p-value was $P=0.000$ which is less than 0.05 ($P<0.05$).

Table 21: Coefficients

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. error	Beta		
Constant	.154	.059		2.607	.010
Negotiation and Award of Contract	.206	.017	.892	2.059	.000
Request For and Submission of Tenders	.196	.048	.874	4.051	.000
Technical Evaluation	.200	.024	.845	2.269	.000

a. Dependent Variable: Public procurement efficiency

The findings indicate that Negotiation and Award of Contract had a positive statistically significantly related with procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district at the p-value less than 5% ($p<0.000$) and with the coefficient at 0.

892. This implies that the unit change in negotiation and award of contract on average increased public procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district by 89.2%.

It was also noted that request for and submission of tenders had a positive statistically significantly related with procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district at the p-value less than 5% ($p < 0.000$) and with the coefficient at 0.874. This implies that the unit change in request for and submission of tenders on average increased public procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district by 87.4%.

The findings indicate that technical evaluation had a positive statistically significantly related with public procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district at the p-value less than 5% ($p < 0.012$) and with the coefficient at 0.845. This implies that the unit change in technical evaluation on average increased public procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district by 84.5%.

When it comes to the relationship between the available procurement procedures and procurement efficiency in selected local government authorities in Dodoma Region, interviewee 1 stated that,

“The whole process of negotiating, dialoguing plus awarding of contracts has been instrumental when it comes to identifying the right supplier for meeting those requirements”.

Interviewee 3 stated, *“the whole process of requesting for and submission of Tenders has played a key role when it comes to periodically evaluating supplier performance, and negotiating contracts that can provide the highest value at minimum cost”*

Interviewee 2 stated that *“Here at our district, technical Evaluation has played a tremendous role when it comes to understanding of different requirements from our different departments at the district”.*

Generally, the study findings indicate that, the more procurement procedures (Negotiation and Award of Contract Request For and Submission of Tenders and Technical Evaluation) were applicable at Dodoma City Council, Kondoa district and Chamwino district, the more the overall public procurement efficiency increased. The findings concur with Mutai (2015)

that established that most of the commercial banks in Kenya have in place procurement policies and procedures that have enabled them achieve transparency, efficiency and accountability in their operations. It was also clear that there was no significant relationship between procurement policies and procedures and supply chain performance represented by R² value of 0.449 which translates to 44.9%. Thus a large unexplained variance of 55.1% meaning there are a number of significant predictors not included in the model. It proved to be a challenge in getting respondents. Most of the respondents thou agreed to participate on condition that the information will not be divulged to any other party other than for academic purposes only. The findings also concur with Kipkemoi (2017) who assessed the effects of procurement practices on organizational performance within the public sector in Kenya and noted that proper structures and systems in procurement ensured transparency, accountability, reduced costs and improved quality and specifications. Continuity of the workforce greatly contributed to organizational performance. The findings also concur with Mutai, (2015) who looked at the impact of procurement policies and procedures on supply chain performance of commercial banks in Kenya and noted that procurement plans and strategies had a positive relationship on supply chain performance and with a P-value of 0.066 which is greater than $\alpha = 0.05$ implies that it is not statistically significant as a measure of supply chain performance. Supplier selection and management had a positive relationship on supply chain performance and P-value of 0.066 which is greater than $\alpha = 0.05$ implies it has no statistical significance on supply chain performance. Last but not least, the findings also shows that tender evaluation had a negative relationship while on the other hand having a P-value of 0.077 which is greater than $\alpha = 0.05$ implying it is not statistically significant.

Conclusions And Recommendations

Conclusion

Basing on the study findings; The findings indicate that, 94.6% of the variation in procurement efficiency of selected local government authorities in Dodoma region can be explained by the independent variables which is ICT application (Supplier Database, Access to Procurement System and Reliable Network). The results indicate that the model accounted for 95% of the variance in dependent variable (available human resources). In addition, the regression also indicated that the model was a statistically significant predictor of procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district. Finally, procurement procedures through its sub independent variables; negotiation and

award of contract, request for and submission of tenders and finally technical evaluation significantly affected procurement efficiency as shown by results of the regression, that indicated that the model accounted for 98.1% of the variance in dependent variable. In addition, the regression also indicated that the model was a statistically significant predictor of public procurement efficiency ($p=0.000$).

All in all, at Dodoma City Council, Kondoa district and Chamwino district, Negotiation and Award of Contract, Human resources and Procurement Procedures had a significant effect on procurement efficiency at Dodoma City Council, Kondoa district and Chamwino district.

Recommendations

Given the conclusions and observations reported herein, the following recommendations are presented below:

- i. Dodoma City Council, Kondoa district and Chamwino district LGAs should use ICT infrastructures in all their procurement activities so as to ensure efficiency.
- ii. Dodoma City Council, Kondoa district and Chamwino district LGAs should strive to get rid of most procurement tasks being done on paper as these are subject slowing the process of procurement, can easily be destroyed by bad weather and require big space to store hence being costly.
- iii. Dodoma City Council, Kondoa district and Chamwino district LGAs should train their staff to appreciate and embrace ICT application with their far-reaching advantages.
- iv. Dodoma City Council, Kondoa district and Chamwino district LGAs should employ competent and professional individuals so as to promote procurement efficiency.
- v. Periodical trainings should be carried out by Dodoma City Council, Kondoa district and Chamwino district LGAs so as to develop staff and ensure professionalism and promote procurement efficiency.

Suggestions for Further Studies

As the findings of this study are based on only selected LGA in Dodoma region that include, Dodoma City Council, Kondoa district and Chamwino district, there is a need to conduct more empirical research on the determinants of procurement efficiency in all local government authorities in Tanzania as a whole. By doing so public procurement efficiency

will be improved in government entities.

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Factors Influencing Implementation Performamnce of Annual Procurement Plan at Air Tanzania Company Limited in Tanzania.

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Abstract

This study investigated the factors influencing annual procurement plan implementation performance at Air Tanzania Company limited in Tanzania. The study specific goal was to determine the effect of budget allocation on annual procurement plan implementation performance. The case study research design was used, with 92 respondents chosen using a simple random sampling technique and key informants chosen using a purposive sampling technique. To collect primary data from respondents, the study used a questionnaire survey and an interview. The data was analyzed using a multiple linear regression model. The findings revealed that, budget allocation were significant and positively related to annual procurement plan implementation performance. The study concludes budget allocation were significant factors influencing annual procurement plan implementation performance at Air Tanzania Company Limited. As a result, the study advises Air Tanzania Company Limited management to improve budget allocation in order to effectively and efficiently implement the annual procurement plan.

Key words: Implementation, Annual procurement plan, budget allocation, Air Tanzania company Limited in Tanzania

Introduction

There has been a rising awareness in recent years of the need for strict control of public procurement planning methods at all levels of government. New and long-standing groups were both included, since they all shared the common goal of making government more transparent and accountable while also making better use of taxpayer dollars. Reference: (Salim and Kitheka, 2019). Periodically, major financial institutions like the World Bank have been publishing statements urging better performance in procurement departments

around the globe. All anticipated purchases necessary for a project's successful execution fall under this category. Unfortunately, many nations still struggle to finish all of their projects on schedule. Since 2014 (Barasa). Procurement department staffing issues, product delivery delays, and corruption at several points all have been cited as key roadblocks to the successful implementation of the procurement plan. To wit: (Muturi, 2015). For this reason, governments in many nations have instituted reforms to boost their procurement practices, allowing them to better manage public finances and boost their economies.

Procurement planning not only aids public institutions in determining what to acquire, when to purchase, and from whom, but it also allows all parties involved in the procurement process to meet and discuss the institution's unique procurement requirements (Pratiwi and Cahyono, 2020). This indicates that there is a direct correlation between knowing what is required and better results in procurement.

It has been noted by Komakech (2016) that if procurement planning and financial budgeting are not linked, considerable amounts of state financial resources may go unused at the end of the fiscal year due to delays in the conclusion of procurement contracts.

Many obstacles have been encountered in the public sector during the planning and execution of procurement, reducing the efficacy with which all scheduled operations are carried out. According to Andreassen's (2012) research, both public and commercial institutions struggle to develop and implement a trustworthy procurement strategy within the allotted time limit. This indicates the necessity for research to identify these restrictions.

On the other hand, Hendijani and Saeidi Saei (2020) stress the importance of the competency of procurement staffs, the commitment of two user departments in meeting their responsibilities, and the timely delivery of funds for planned projects as driving factors behind Rwanda's success in this area. Kiage (2013) found that quality supply restrictions were mitigated when thorough planning and execution of all procurement operations were undertaken. The issues of quick changes in the application of procurement procedures and other standards in the public sector, especially in most emerging nations, are also emphasized.

All internal and external procurement processes used to attain organizational objectives and goals will be directly impacted by these shifts.

Overly optimistic plans, budgets, and cost forecasts underpin Tanzania's public procurement system. An audit found that the amount of money set aside for procurement was lower than originally anticipated, and that funds were not fully provided on time, which slowed down the process and made it more difficult to conclude the deal (Mong'areh and Mwang'angi, 2016). However, since the government's financial structure is based on cash budgets, it's not uncommon for public entities (PEs) to fall short of their annual procurement targets.

Silvesther (2020) claims that various Tanzanian government agencies, notably Air Tanzania Company Limited, were unable to carry out procurement projects during the 2016/2017 fiscal year due to a lack of funding caused by inflated cost estimates. Therefore, although procurement plans have been institutionalized as an integral part of procurement activities in Tanzania's Companies, their impact on procurement performance remains an area in need of investigation. This study intended to assess the factors influencing implementation performance of annual procurement plan in Air Tanzania Company Limited which include timely budget allocation.

Statement of the Problem

Accountability in terms of cost-effectiveness, efficiency, and harmonious resource allocation hinges heavily on the success of the procurement plan's execution. One of the most important instruments in documenting value for money, such as decreasing costs in each purchase which is done in the various public institutions, the Annual procurement plan has been regarded as crucial by the public sectors in Tanzania (Msese, 2014). There have been many initiatives put in place to better the public sector procurement process. An important positive step towards guaranteeing the function is carried out in accordance with the planned acquisitions was the passage of the Public Procurement Act, Cap 410, and other procurement guidelines that emphasize the establishment of an effective procurement process backed by the country's legal system.

Unfortunately, not all public organizations, including ATCL, have followed the Public Procurement Act (2011) amendment 2016 and its regulation and implemented the procurement strategy. While the government is required by this Act to establish a procurement plan and to use that plan as a road map to acquire all organizational requirements that are to be attained through procurement procedures, not all public firms meet the desired objectives on time (CAG report, 2019/2020). Air Tanzania Company Limited (ATCL) made purchases exceeding Tsh.464.13 million and USD 737,307 that were

not included in the yearly procurement plan or the budget, as shown in a CAG report. As per regulation 69 (3) and (7) of the public procurement laws, 2013 as revised in 2016, seven procurement contracts were executed despite not being budgeted for or mentioned in the APP. Among these issues is the potential for the Public Companies to incur extra costs due to the formulation of unrealistic procurement plans, which would delay the delivery of critical goods, services, and works in procuring (PPRA report, 2020).

Previous studies related implementation of annual procurement plan (Salum, 2019) has been carried out their findings focused on the common challenges in implementing procurement plan includes central government funding delays, poor support from other departments within the organization, corruption practices by key stakeholders involved in procurement processes, and a lack of knowledge in the preparation of procurement plans. Furthermore, some of these studies were conducted in government agencies, leaving a knowledge gap on the factors influencing implementation of annual procurement performance plan in Air Tanzania Company Limited.

As an effort to contribute in illuminating such an area, this study seeks to assess the factors that influence the implementation performance of Annual procurement plan in Tanzania's public companies, with the Air Tanzania Company limited focused as a case.

Theoretical Framework

Transaction Cost Theory

According to the transaction cost theory, company expenses are what they are because of the way they are incurred. The basic premise of this theory is that any time an organization receives a service or product from another source, it must pay for it (North, 1990). The theory of transaction costs is grounded in the framework of governance, and it explains how businesses may meet their goals despite the presence of both internal and external expenses, thanks to the use of internal and external transactions. Any activity taken by management over a certain time period, whether internal or external, must have a positive net effect. The organization's structure impacts the efficiency and effectiveness of its deals and expenses. All procurement processes inside the firm should be structured to achieve the highest possible value for the dollar spent. There are three types of typical expenses connected with transaction theory: Spending on "sourcing," or finding reliable providers of an organization's needs, and "bargaining," are both expenses. Expenses and the cost of making a decision

(These are the sums that must be spent to acquire the essential resources or perform the necessary labor. The actual price of enforcing and policing the acquisition of the necessary products or services (Cuypers et al., 2021). Expenses associated with checking that all supplies bought adhere to the specifications laid out by the user department. Therefore, the goal of the transaction cost hypothesis is to make transactions more productive and efficient.

Empirical review

According to Lema's (2013) research on the topic, "Factors Affecting Effective Implementation of Procurement Plan in Local Government Using Meru DC," one of the most common problems is the delay of funds from the central government, which prevents the government from carrying out its plans. Additionally, there is a problem with their being insufficient funds made available in comparison to the agreed budget, and there is also a problem with decision-makers not having enough knowledge of the procurement processes.

According to Ntembanda's (2013) research on the factors hindering the Ministry of Natural Resources and Tourism's procurement plans, the lack of support from user departments who mistakenly believe that the PMU is responsible for preparing and implementing the plans is the biggest obstacle to the successful execution of these plans. Another difficulty is that often not all requirements are included in the plan, which can lead to unplanned purchases being made.

Njeru (2015) investigated the factors that hinder the successful implementation of procurement programs at Kenyan public universities. Forty public tertiary education institutions in Kenya served as the study's population, and the research strategy was descriptive correlational. The sample of 35 public tertiary education institutions was selected using a stratified random sampling strategy. The primary method of data collection was a series of questionnaires that had been pilot validated for validity and reliability. Analysis of descriptive and inferential statistics revealed that in over 80% of Kenya's tertiary public training institutions, the procurement policies, supplier management strategies, inventory management methods, professional training, and use of ICT-based systems were hindering effective implementation of procurement practices. We conclude that supplier management is the most important component in determining the success of procurement processes in Kenya's public tertiary education institutions, followed by training and procurement policies.

According to Goitom (2016), whose research is titled "Assessing Procurement Planning Practice and Its Implementation: The Case of UNDP Ethiopia Country Office," effective management of the public procurement function is essential to accomplishing the development goals set by the United Nations Development Programme (UNDP). Consequently, efficient and effective procurement management is crucial for accomplishing these objectives. Planning, allocating funds for bids, evaluating those bids, awarding contracts, and managing those contracts are all part of public procurement management. The study used a descriptive design and a purposive sampling technique to collect data from 45 respondents across all requesting departments out of a total population of 77. The majority of respondents acknowledged that none of the following practices related to procurement planning preparation were used in the workplace: early needs identification; specification preparation; price estimation; consolidation of procurement needs at the office level. Instead of consolidating purchases at the office level, procurement is carried out in response to requests from particular departments. The research also confirmed the absence of collaboration and teamwork between the requesting and procurement divisions during the procurement plan formulation phase. The study's findings on procurement implementation practices revealed that bids were advertised without a plan, that short notice and re-advertisements were routinely undertaken, and that contract amounts and terms of reference and specification were frequently varied and modified. These suggestions stem from the research findings. To ensure that every asking unit on time creates its annual procurement plan, upper management must set up effective monitoring and regulating system. A thorough assessment of the organization's Programme and Operations Policies & Procedures is necessary to establish binding provisions requiring compliance on the part of the asking and procuring units. To sum up, before giving final approval to the outcomes of any procurement process, upper management should check to see if the corresponding request is included in the authorized procurement plan and assigned a unique identification number.

Research Methodology

Study Area

The study was conducted at Air Tanzania Company Limited. The study area was selected because it was reported by CAG to be among of public institution to have a poor implementation performance of annual procurement plan. (CAG,2020)

Design, Sample and Sampling procedures

The study was employs a case study design (Kothari & Garg, 2019). This design was selected because help researcher wanted to explore in depth information and as it suits the demands of the study, since the design will allow researcher to collect data at a single unit. Also the study employs two sampling procedure namely stratified sampling technique and purposive sampling technique (Boru, 2018). The purposive sampling was employed in selecting area of study and key informants. Purposive sampling was used in this study to collect qualitative data from key informants or selected respondents based on their characteristics or knowledge of the study for the purpose of gathering relevant information; however, judgmental sampling was used to manage procurement unit staff due to a lack of sufficient knowledge for practice on procurement planning issues (Kothari and Garg, 2019). Stratified random Sampling technique was used to select respondents from each stratum and from different departments and implementing unit at the Air Tanzania company limited. The stratification was based on the functions and expertise's of respondents under this respect all respondents were stratified in the different strata and selected. Therefore, distribution of respondents is presented under table below;

Table 22: Distribution of respondents

No	Departments	Population	Sample size
1	PMU	8	7
2	Finance and accounting	7	6
3	ICT	8	7
4	Human resources	9	8
5	User department	60	52
Total		92	80

Sample size

The sample size in this study was drawn from population of 92 respondents using (1967) below:

$$n = \frac{N}{1 + N * (e)^2} \dots\dots\dots (i)$$

Where: n = the sample size

N = the population size

e = the acceptable sampling error (5%)

The sample size was including 80 employees involved in implementation of procurement plan.

Data Collection and Data Analysis Techniques

Data was analyzed using both quantitative and qualitative methods. Quantitative data for all objectives three specific objectives which included: to determine the influence of budget allocation on implementation of annual procurement plan, to assess the influence of qualified procurement staffs on implementation of annual procurement plan and to determine the influence of user department involvement on implementation of annual procurement plan.

To determine the influence of all variables on the implementation of annual procurement plan. Therefore, multiple linear regressions were deployed. The regression model was presented by the followings equations;

The effect of budget allocation on implementation performance of annual procurement plan

$$Y = \beta_0 + \beta_1 TPB + \beta_2 SD + \beta_3 BC + \epsilon \dots \dots \dots (ii)$$

Where;

Y= Implementation performance of annual procurement plan

β_0 =Constant

TPB = Timely preparation of budget

SD= Specific department

BC= Budget control

β_1 =Coefficient of timely preparation of budget

β_2 = Coefficient of specific department

β_3 = Coefficient of budget control

ε = Error t

Results and Discussion

Descriptive Statistics Results

Characteristics of respondents

Respondents were asked to specify/ state their social-demographic characteristics such as age, sex, education level and working experience of the study respondents. This was aim at assess the respondents general information before other research questions.

Sex of respondents

The study findings in (Table 2) indicated that more half 47 (58.8%) of the respondents were male while remaining 33 (41.3%) were female. This implies that, there is increasing trend of female to be employed as the result of the women empowerment in most of the government institutions. This is due to the slightly different observed between male and female interviewed. Therefore the research believed to have involved equally all sex categories in the study and the information obtained are not gender biased.

The findings not inline by Nyaga & Kihara (2017) observed that, gender does not play a significant role in the success of annual procurement plans. Instead, it appears that good planning and execution are the key factors in achieving successful outcomes. This suggests that hiring a team composed of both men and women is not necessary to achieve success. However, it is important to ensure that all members of the team are capable of executing the plan effectively.

Table 2: Social demographic characteristics of respondents

Characteristics	Categories	Frequency	Percent
Age	20-27	13	16.3
	28-35	41	51.3
	36-43	10	12.5
	44-55	16	20
Sex	Male	47	58.8
	Female	33	41.3

Working experience	Less than 1 year	4	5
	1-2 years	19	23.8
	3-5 years	29	36.3
	Above 5 years	28	35
Education level	Certificate	11	13.8
	Diploma	11	13.8
	Degree	22	33.8
	Masters	29	36.3
	PHD	2	2.5

Source: Field data, 2022

Age of the respondents

Age was among of the social demographic characteristics assess during the interview and revealed that majority of respondents 41 (51.3%) were in an age interval between 28-35, 16 (20%) were in an age interval of 44-55, 133 (16.3%) were in an age interval between 20-27 and 10 (12.5%) were in an age interval between 36-43. This implied that most of the staff are youth whom is believed that there energetic and powerful in terms of their performance at the work place. The findings supported by Nyaga & Kihara (2017) state that, it is generally accepted that younger people are typically more agile and able to implement change more quickly than older. This may result in a higher level of implementation performance for a procurement plan which is delivered by a younger plan.

Education of respondents

During the interview respondents were asked to narrate their level of education and study findings indicated that majority of the respondent employed have master's degree 29 (36.3%), 22 (33.8%) were possess degree, 11 (13.8%) were poses diploma and 11 (13.8%) were poses certificate level. This means that most of the employees have high level of education. Some factors that may affect the relationship between education level and implementation performance of annual procurement plan include the level of experience of the individual responsible for implementing the plan, the complexity of the plan, and the resources available to implement it (Kamendu, 2020). Additionally, Kamendu, (2020) assert that, a higher education level may allow an individual to better understand the various aspects of procurement and the various methods used to purchase goods and services in the qualification/ level of education.

Working experience of respondents

Respondents were asked to state the experience they have with regards to the Air Tanzania Company Limited. This was based on the number of years they have spent on the work. Therefore, the study findings revealed that majority of the respondents have 3-5 years of experience on work which constitute 36.3% of all interviewed respondents, followed by above 5 years of experience at work constitute 35%, 1-2 years have experience which constitute 23.8% as well as less than one year are only constitute 5%. This implied that majority of the respondents have higher experienced which reflects the sensitive of the place of work as their conversant with the Air Tanzania Company Limited. The findings supported by Nyaga & Kihara (2017) state that, those with more working experience may be more likely to successfully implement an annual procurement plan. This is because they are likely to have a better understanding of the process and be more experienced in executing it. They may also have a better understanding of the needs of their organization and be better able to identify potential suppliers.

Inferential Statistics Results

To analyse the factors influencing the implementation of procurement plan performance different independent variable was included such as timely budget preparation, specific department and budget control were as the dependent variable is implementation of the annual procurement plan at Air Tanzania Company Limited.

Furthermore, independent variables included in the model were good predictors of implementation performance of annual procurement plan. About 73.8% of variations in implementation performance of annual procurement plan were due to variations in independent variables included in the model. Findings indicated that independent variables included in the model such as timely budget, specific department and budget allocation collectively had a significant influence on implementation performance of the annual procurement.

Table 3: Effect of budget allocation on implementation performance of annual procurement plan

Independent	B	Std. Error	t-value	Sig.
Constant	-340.25	221.044	-1.53	0.432
Timely budget preparation	1.105	0.105	10.576	0.000
Specific department	0.886	0.065	13.718	0.000
Budget allocation	0.184	0.059	3.115	0.003
R² = 0.738, F-value = 71.44, P < 0.05				

Findings from Table 3 indicated that, timely budget preparation was significant and positively related to implementation performance of annual procurement plan with coefficient of 1.105. This implies that, any unit increase of timely budget preparation may result into an increase of implementation performance of annual procurement plan by 1.1%.

Similarly, findings from Table 3 indicated that, specific department was significant and positively related to implementation performance of annual procurement plan with coefficient of 0.886. This implies that, any unit improvement of specific department within Air Tanzania Company Limited. may result into an increase of implementation performance of annual procurement plan by 88.6%.

Additionally, findings from Table 3 indicated that, budget allocation was significant and positively related to implementation performance of annual procurement plan with coefficient of 0.184. This implies that, any unit increase of budget allocation may result into an increase of implementation performance of annual procurement plan by 18.4% in Air Tanzania Company Limited.

This study is contrary with study by study by Magoro (2010) who suggested that an effective and well-prepared annual procurement plan has a significant positive influence on the effective implementation of an annual procurement plan in the procurement of donor-funded projects. This implies that a well-prepared annual procurement plan influences the implementation performance of the annual procurement plan. This result is similar with the Neupane, Soar, Vaidya and Yong (2012) who argued that when organization prepare implementable annual procurement plan within the organization, simplify the activities during implementation.

Conclusions, Recommendation

Conclusion

The study found that, budget allocation was significant and positively related to implementation performance of annual procurement plan in terms of budget preparation, specific department and budget allocation. The study concludes that, budget allocation is the one of important factor influencing implementation performance of annual procurement plan at Air Tanzania Company Limited.

Recommendation

To improve budget allocation on implementation performance of annual procurement plan. The study recommends that, the management of Air Tanzania Company Limited should improve budget allocation on the procurement plan in order to ensure that the process is efficient and effective. There are a number of ways to do this, but one of the most important ways is to ensure that the budget is allocated in a way that allows for effective and efficient procurement. This means making sure that there is enough funds available to cover the costs of bidding and purchasing items, as well as ensuring that the process is transparent and open to competition.

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Influence Of Practitioners' Behavioral Intention Towards Effective Application of TANePS In Public Organizations in Tanzania

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Abstract

The research purpose was to ascertain the influence of practitioners' behavioural intention towards effective application of TANePS in underperforming public organizations in Tanzania. The motivation for the study was because there was circumstantial evidence shown in Public Procurement Regulatory Authority (PPRA) Annual Performance Evaluation Report for financial year 2020/2021, that many Public Entities (PEs) despite of being connected to the TANePS, they are not effectively applying it in their day to day procurement activities. The study used sample size of 105 respondents, a cross-sectional survey and primary data only. The study used the mixed methods research design. Multiple linear regression model with the aid of SPSS version 26 was employed in quantitative data analysis while content analysis method was employed for the qualitative data and information obtained was used to support the quantitative data. Findings for the study revealed that social influence has a significant negative relationship but effort expectancy and facilitating conditions have significant positive relationship with effective application of TANePS. The findings imply that practitioners' behavioural intention to use TANePS has the influence towards effective application of TANePS. In order to attain effective application of TANePS in Tanzania, the study recommends that emphasis and priority should be given in improving facilitating conditions as it revealed to have the strongest unique contribution compared to other independent variables.

Keywords: Underperforming public organizations, Application of TANePS, Practitioners' behavioural intention

Introduction

Procurement function is an important function in any organizations' establishment especially in public organizations as it contributes in realization of value for money in any government expenditure, according to Nditi (2014) more than 75% of government expenditures are in

procurement. For many years this function was carried out manually, this caused a function to be seen as a tedious and repetitive work. E-Procurement started in the 1980s, following the development of electronic data interchange (EDI). In the context of procurement EDI, allowed customer and suppliers to send and receive purchase orders and invoices using call-forward networks, which was eventually superseded by email (Croom, Brandon, & Jones, 2005). Later in the 1990s EDI was improved as organizations developed more specialized online catalogues, specifically for vendors. In its modern guise e-procurement involves, activities related to evaluating and selecting suppliers, such as e-Auctions and e-Tenders (Neef, 2001). Electronic procurement possesses several advantages over manual procurement system, Mchopa (2012), in his study indicated that organizations that use e-procurement technologies saves almost 42% in purchasing transaction costs due to the simplification in the purchase process. Despite, a digital gap between countries around the world, many countries had been struggling to implement e-procurement and therefore had been several studies conducted on electronic procurement. The notable studies are that of (Killo, 2021; Soong, Ahmed, & Tan, 2020; Shatta, 2020; Maagi, 2020; Kamaghe *et al.*, 2020; Talukder *et al.*, 2020; Abdul & Lyimo, 2019; Alraja & Kashoob, 2019; Kirui & Mukulu, 2019 & Rosli & Songip, 2017).

The E-Procurement Policy in Tanzania was developed in 2004 through integration of e-Government and soft-launching in July, 2010 (Sijaona, 2010). In 2018, Tanzania National Electronic Procurement System (TANePS) was introduced and operated as pilot study including 100 selected PEs. Currently, TANePS is fully launched following government circular of 23rd October, 2019 which require all government PEs to join and use the system as of January, 2020. Regardless of the adoption and said advantages of e-procurement, still many of public organizations in Tanzania are either underperforming in application and/or not using the e-procurement system in their day to day procurement activities. For example, PPRA in its Annual Performance Evaluation Report for financial year 2020/2021, showed that, out of 718 public entities which are registered in TANePS, only 194 public entities (equal to 27%) are fully utilize (apply) the system in their day to day procurement activities. It is from this context; the researcher decides to conduct this study in order to find out why many public organizations in Tanzania are still underperforming and/or not using the TANePS in their day to day procurement activities despite of its adoption. The study, therefore, ascertained the influence of practitioners' behavioural intention towards effective application of TANePS. Specifically, the study; examined the impact of effort expectancy

towards effective application of TANePS; examined the social influence towards effective application of TANePS, and assessed the facilitating conditions towards effective application of TANePS in Dodoma City Council, Bahi District Council and Roads Fund Board.

Literature Review

Theoretical literature review

The study used the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh *et al.*, (2003). The theory aimed to explain user's intentions to use an information system and subsequent usage behavior. The theory examines the acceptance of technology; it suggests that the actual use of technology is determined by behavioural intention. The perceived likelihood of adopting the technology is dependent on the direct effect of four key constructs, namely performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh *et al.*, 2016). The theory applied in this study as it provides us with constructs which determine the usage behavior of the practitioners. This study considered this theory as relevant in influencing practitioners' behavioural intention towards effective application of TANePS in public organizations in Tanzania, with the aim to ascertain whether effort expectancy, social influence and facilitating conditions could influence practitioners' behavioural intention towards effective application of TANePS.

Empirical literature review

To obtain more information on the influence of practitioners' behavioural intention towards effective application of TANePS, empirical review was conducted. Given the potential benefits of the Internet and other web-related technologies to revolutionize the procurement process, adoption of e-procurement has increased in most countries but at the same time the rate of adoption varies from country to country (Nziku & Siwandeti, 2019). The study examined the effect of effort expectancy towards effective application of TANePS in Tanzania, effort expectancy refers to the effort needed to use the system, whether it is simple or complicated. Soong *et al.* (2020) in their study which aimed to examine Malaysian small and medium-sized enterprises (SMEs) adoption of electronic government procurement (EGP), observed that, effort expectancy, performance expectancy and social influences had a direct effect on the adoption of EGP in the private sector, they added that the behavioural intention of the user would influence the usage behaviour. The observation was supported by Baishya & Samalia (2020) who found out that, Performance Expectancy, Effort Expectancy,

Social Influence predict the Behavioral Intention of the user. Also, Akram, Quaresma, & Rahman (2019) found out that, Social Influence, Facilitating Conditions, and Personal Innovativeness in Information Technology had a significant influence on physicians' Behavioral Intention to adopt the Electronic Health Record (EHR) system in Bangladesh, whereas Performance Expectancy, Effort Expectancy, and Resistance to Change had no significant influence. However, the studies were less relevant to Tanzania as they were conducted in Malaysia, India and Bangladesh respectively.

Besides, social influence is said to have a critical role in attaining effective application of TANePS in Tanzania. The effect of social influence is significant when the use of technology is mandated (Venkatesh *et al.*, 2016). In the mandatory context, individuals might use technology due to compliance requirement, but not personal preferences. A person is motivated to comply with the referents even if he/she does not favor the behavior. Gursoy, Hengxuan, Chi, & Nunkoo (2019) in their study, suggested that customers go through a three-step acceptance generation process in determining whether to accept the use of any technology. Findings indicated that social influence and hedonic motivation are positively related to performance expectancy while anthropomorphism is positively related to effort expectancy. Both performance and effort expectancy are significant antecedents of customer emotions, which determines customers' acceptance and use of a technology. Patil, Tamilmani, Rana, & Raghavan (2020) they revealed that intention to use a technology was significantly influenced by attitude, social influence, and facilitating conditions. But, Attuquayefio & Addo (2014) used the UTAUT model to analyze students' ICT adoption. Their study sought to provide further understanding of issues surrounding acceptance of information and communication technology (ICT) by students of tertiary institutions in Ghana. They found out that, Social influence and Performance Expectancy were statistically insignificant towards actual usage of ICT by tertiary students in Ghana.

The study also, sought to examine the facilitating conditions towards effective application of TANePS in Tanzania. Facilitating conditions are related to the availability of sufficient resources and support for individuals to use technology (Neslin & Shankar, 2009). Technological resources have been consistently identified as an important factor for successful information systems adoption (Mambo, Ombui, & Kagiri, 2015). Organizations adopt new technologies to improve the efficiency and effectiveness of various work processes, unfortunately, many technology's based products and services never reached their full potential, and some are simply rejected (Burton-Jones & Hubona, 2006). Failed investments in technology may not

only cause financial losses, but also lead to dissatisfaction among employees (Venkatesh, 2010). Ngunjiri *et al.*, (2018) undertake the study on the challenges Affecting E-Procurement System Implementation in Murang'a County Government, Kenya. The study revealed that information technology infrastructure had a positive & statistically significant effect on E-procurement system implementation. They added that, information technology infrastructure for E-procurement system implementation has been a major challenge due to inadequate fund for acquisition of both computer hardware and software required for successful implementation of the system. Also, inadequate ICT infrastructure, incompatibility of various ICT systems and lack of stable internet connectivity affected effective E-procurement implementation. The study by Tutu *et al.*, (2019) revealed that; availability of the internet, power stability, capacity enhancement of procurement officers and availability of infrastructure were important critical factors when it comes to execution of e-procurement while the mandatory use of e-procurement, technical interoperability, budgetary control among others were of less importance.

As a matter of fact, that Tanzania is different from other countries, where other studies were carried out, then, those research findings cannot be generalized for the Tanzanian context. Also, most of the literatures in Tanzania, concentrated much in the “implementation of e-procurement” and ignoring the “application of e-procurement” which is the contemporary phenomenon. The previous researches paid less attention to user's behaviors which may affect application of the implemented e-procurement system. Furthermore, past studies did not consider underperforming public organizations stated in PPRA Annual Performance Evaluation Report for financial year 2020/2021, in order to find out why are they underperform. This empirical research gap derives the researcher to conduct a research in order to ascertain the influence of practitioners' behavioural intention towards effective application of TANEPS in public organizations in Tanzania.

The conceptual framework is the basis of a research problem. It stems from the theoretical framework and usually focuses on the section(s) which become the basis of a study. Whereas the theoretical framework consists of the theories or issues in which the study is embedded, the conceptual framework describes the aspects selected from the theoretical framework to become the basis of the enquiry (Kumar, 2011). The UTAUT theory was adopted to support the study so as to provide a theoretical basis. The researcher has assumed that effort expectancy, social influence and facilitating conditions as the independent variables and

Effective application of TANePS as the dependent variable. The researcher believes that effort expectancy, social influence and facilitating conditions have a significant effect towards effective application of TANePS as shown in figure 1.

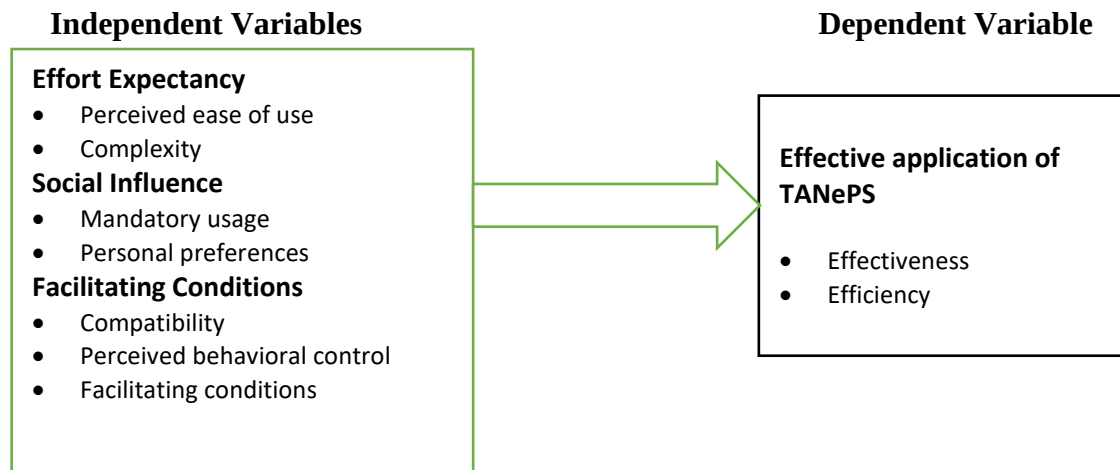


Figure 6: The Conceptual Framework; **Source:** Modified from Venkatesh *et al.*, (2003). The unified theory of acceptance and use of technology (UTAUT)

Research Methodology

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically (Kothari, 2004). This study used cross-sectional research design because it allows multiple variables to be investigated at one time, also it saves time and cost by systematically selecting a relatively small sample (Saunders *et al*, 2016). The design was employed using a survey to get a representative sample which allows generalization of the study. This study applied mixed approach whereby both qualitative and quantitative methods were used concurrently thus ensuring validity and reliability of the study (Luton, 2015). In this study, both quantitative and qualitative data were used concurrently from data collection to data analysis. The study was conducted in Dodoma city, because currently, the government is officially shifted to Dodoma and many of public organizations and institutions implementing and use TANePS are currently located in Dodoma. Also, PPRA which is entitled to host, manage and operates TANePS is located in Dodoma. This has made Dodoma a one-point center when it comes the issue of TANePS, thus the region was considered appropriate for conducting this study. The study population was procurement practitioners, ICT staffs, Finance & Accounts who are directly involved in the routine procurement activities and/or managing organization's ICT

facilities, working with Dodoma City Council, Bahi District Council and Roads Fund Board, where by the total number was 142 employees. The sample size of 105 respondents were drawn from the population by using Yamane's (1967) formula. The formula was used, because the study population was known.

The researcher collected and used only primary data for the research analysis. This was because the primary data is the only option if adequate and valid secondary data is not available (Issa, 2020). The data was directly collected using a structured questionnaire constructed on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) from the Head of departments, HPMUs, Senior officers, Officers and staffs of Dodoma City Council, Bahi District Council and Roads Fund Board in Dodoma region. Saunders *et al.*, (2012) assert that the questionnaire is the most preferred data collection instrument in survey strategy because each respondent is asked to exactly respond to the same set of questions. Data collection using a questionnaire is an efficient method of collecting responses from a large sample to fit quantitative data analysis (Saunders *et al.*, 2012). The researcher distributed 105 sets of self-completed questionnaires by hand delivery and collection method to the targeted respondents to quicken the response rate from the respondents. An interview was used due to fact that the study involved the verbal interaction between interviewer and interviewee to explore more information with regards to the effective application of TANePS in the public organizations. An interview guide with open-ended questions was developed in order to capture only qualitative data for this study. The interview guide was used because were relatively quick and easy to administer and it had been of particular use, when clarification of certain questions was required. The researcher was personally interviewed a total of 6 targeted key informants.

Both qualitative and quantitative data analysis procedures were used, for the qualitative data, content analysis method was used, this study adopted the five steps provided by Luo (2022) to derive themes from qualitative data. The qualitative data were transcribed into texts and then relevant themes were developed and the findings were matched with relevant numerical findings in this study. The information obtained was used to supplement the quantitative data. For the quantitative data; firstly, data validity was assessed by using Exploratory Factor Analysis (EFA) technique, exploratory factor analysis was performed in order to form a group by gathering together items that measure the same factor, then data for objective one, two and three were analyzed by using multiple linear regression method which was suitable

for showing the correlation of variables (Kothari, 2009). The given equation 1, was employed to estimate the relationships between independent variables and a dependent variable.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \dots \dots (1)$$

Where: Y= Effective application of TANePS; β_0 , β_1 , β_2 , and β_3 are coefficients or constants; X_1 = Effort expectancy, X_2 = Social influence, X_3 = Facilitating conditions.

Findings

Reliability and Validity

Reliability of this study was ensured through Cronbach's Alpha test to measure internal consistency. According to George & Mallery (2003) Cronbach's alpha is the most common reliability coefficient which estimates internal consistency by determining how all items on a test relate to all other items and to the total test - internal coherence of data. According to the general rule of thumb, the value of alpha of > 0.7 is acceptable, in this study the Cronbach's Alpha test result for all three independent variables was well above 0.7 which means the data was reliable and acceptable for further analysis, as shown in Table 1.

			Table
Variable	Cronbach's Alpha	N of Items	1:
Effort Expectancy	0.755	5	Cronbach's
Social Influence	0.852	5	Alpha Test
Facilitating Conditions	0.874	6	Result

Source: Field Data (2022)

Either exploratory factor analysis was conducted in order to evaluate the validity of the underlying construct, the Kaiser–Meyer–Olkin (KMO) test results of construct validity for all three constructs were well above 0.6 which means that sample data in this study was adequate as shown in Table 2.

			Table
Variable	KMO	N of Items	2: KMO
Effort Expectancy	0.63	5	Test Results
Social Influence	0.79	5	
Facilitating Conditions	0.87	6	Source

e: Field Data (2022)

Testing Research Hypotheses

Linearity assumption was first tested to know if it meets the assumption criterion. The best way to check the linear relationships is to create scatterplots and then visually inspect the scatterplots for linearity; the results showed that the relationship between the Independent Variables (IVs) and Dependent Variable (DV) is linear as shown in Figure 2.

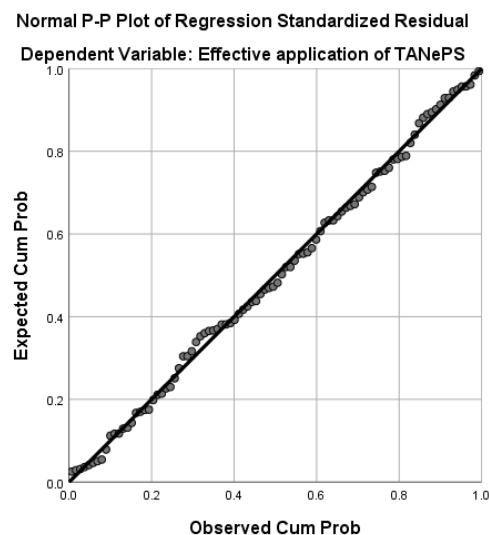


Figure 2: Scatter plots of Residuals Indicating Curvilinear and Linear Relationships;

Source: Field Data (2022)

Normality and multicollinearity assumptions were also tested. Normality occurs when residuals are normally distributed. This is tested either using a histogram with a superimposed normal curve or the Normal Probability Plot method. The researcher used a histogram with a superimposed normal curve to test for residual normality assumption, the result showed that the values of the residuals are normally distributed as shown in Figure 3. Also a test for multicollinearity was conducted were by the researcher used the Variance Inflation Factor (VIF) method and analysis of collinearity statistics shows this assumption has been met, as VIF scores were well below 10.

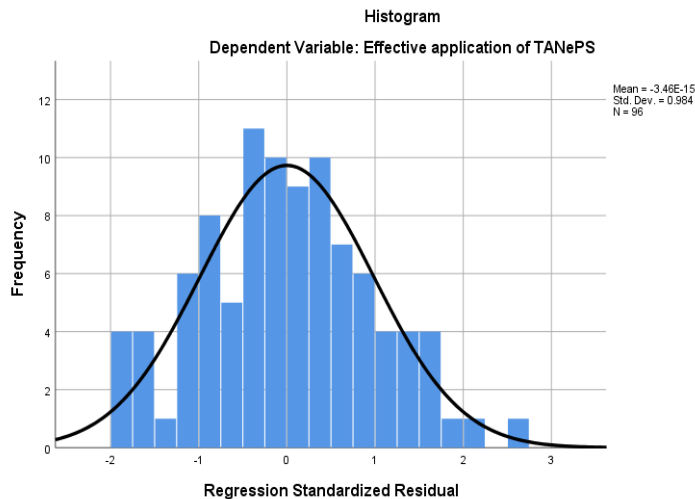


Figure 3: Variance Inflation Factor (VIF) Values; **Source:** Field Data (2022)

Correlational analysis was also done to ascertain if multiple linear regression assumptions were met. To test for this assumption, the researcher used the Durbin Watson statistic. The test will show values from 0 to 4, where a value of 0 to 2 shows positive autocorrelation, and values from 2 to 4 show negative autocorrelation. The mid-point, i.e., a value of 2, shows that there is no autocorrelation. The results showed that the residuals were positive correlated and the Durbin-Watson value was close to 2 (Durbin-Watson = 1.980). That is to say, this assumption had been met.

Coefficients of multiple linear analysis

The objective of the research was to ascertain the influence of practitioners' behavioural intention towards effective application of TANePS in underperforming public organizations in Tanzania. Specifically, it was to check whether effort expectancy, social influence and facilitating conditions can affect effective application of TANePS. The results showed that, social influence can negatively affect effective application of TANePS but effort expectancy and facilitating conditions can positively affect effective application of TANePS.

Table 3: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.944 ^a	.892	.888	.06231	1.980

Source: Field Data (2022)

Table 3, indicates that the R square value was .892. This means that effort expectancy, social influence and facilitating conditions explains 89.2% of the variance in effective application of TANePS, where 10.8% remained unexplained and thus effective application of TANePS is affected by other factors for 10.8%.

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics		Source: Field Data (2022) Results have been further shown in Table 4, indicating that independent variables have a significant effect on the dependent variable and thus the equation of the model is shown in equation 2 as follows:
	B	Std. Error	Beta				Tolerance	VIF	
(Constant)	.022	.148			.151	.880			
Effort Expectancy	.959	.050	1.500	19.144	.000	.192	5.216		
Social Influence	-.846	.076	-1.271	-11.058	.000	.089	11.232		
Facilitating Conditions	.906	.056	1.649	16.248	.000	.114	8.758		

e been further shown in Table 4, indicating that independent variables have a significant effect on the dependent variable and thus the equation of the model is shown in equation 2 as follows:

$$Y = 0.022 + 0.959 (\text{Effort Expectancy}) + (-0.846) (\text{Social Influence}) + 0.906 (\text{Facilitating Conditions})$$

Findings and Discussion

The researchers used unstandardized beta coefficients in measuring the strength of the individual independent variable effect to the dependent variable. It shows that the unit increase in Effort Expectancy leads to a 0.959 increase in Effective application of TANePS, it further shows that, a unit change in Social influence leads to an inversely increases in Effective application of TANePS by 0.846 and lastly, a unit increase in facilitating conditions will leads to a 0.906 increase in Effective application of TANePS. Generally, all independent variables (Effort Expectancy, Social influence and Facilitating conditions) revealed to

contribute significantly to the Effective application of TANePS. However, facilitating conditions revealed to have the strongest unique contribution (beta value=1.649) as compared to other independent variables followed by effort expectancy (beta value=1.500) and social influence revealed to have a least unique contribution (beta value=-1.271) towards effective application of TANePS in public organizations in Tanzania.

The findings are in harmony with other studies including that of Baabdullah *et al.*, (2019) which showed that the main factors – performance expectancy, price value, facilitating conditions, hedonic motivation, habit, system quality and service quality – were found to have a significant impact on actual use behaviour. Also, Jewer (2018) in his study, proposed that there will be a significant relationship between facilitating conditions and behavioral intention. The study revealed that the modified-UTAUT model showed significant effects in facilitating conditions ($r=0.539$, $p<0.001$) on behavioral intention to use the website. As proposed, facilitating conditions – having the resources necessary to view the website and having the ability to find the website – were the most important factors influencing behavioral intention. Either, Deden *et al.*, (2017) in their study, aimed to find critical factor that influence e-government adoption. The study revealed that facilitating conditions have a strong unique significant effect on behavioral intention to adopt and use e-government.

Basically, facilitating conditions is a crucial factor once you want to determine the influence of practitioners' behavioural intention towards actual usage of any technology as it said to have a direct effect on intention to use. Facilitating conditions are related to the availability of sufficient resources and support for individuals to use technology (Neslin & Shankar, 2009). Lack of assistance, lack of timely support, incomplete information, and limited resources can prevent individuals from accepting web-based technology (Kamaghe *et al.*, 2020). The findings revealed that there are lack of appropriate ICT technical assistance within the organization and a timely technical support from PPRA when the system failure occurs. This is due to the fact that many organizations have got low number of ICT officers to manage organizational ICT facilities and those available ICT staffs don't have detailed skills on how the TANePS operates. Also, issue of timely technical support from PPRA and limited network (overloaded/slow network) was said to be an obstacle towards effective application of TANePS.

Similarly, the interviewee from RFB-PMU supported that:

“...there are few number of ICT staffs here, they are trying their level best to provide appropriate required assistance but they don’t know much about how TANEPS works, this is because from ICT department, only ICT manager attended TANEPS training...”

(Mtei, 27 June, 2022)

Also, key informant from DCC-PMU added that:

“...the support obtained from TANEPS help desk is low and there is also a problem of slow network, this may cause you to work overnight or weekends because at that time usually the system is stabilizing...”

Edna, 18

May, 2022

System integration with other vital systems like Government Asset Management Information System (GAMIS), “*Mfumo wa Malipo Serikalini*” (MUSE) and the newly established GPSA Integrated Management Information System (GIMIS) for procurement of common use items and petroleum is another indicator within facilitating conditions which determine the effective application of TANEPS. The findings revealed that currently TANEPS is not integrated with any of the above mentioned systems, this lead to late payment of suppliers, tedious work of shifting assets information from TANEPS to GAMIS manually, bottlenecks associated with the procurement of common use items and petroleum and other several shortcomings caused by the system being not integrated with vital government’s management information systems, which in one way or another have resulted into ineffective application of TANEPS.

This was also supported by RFB-PMU who added that:

“...payment process need to be linked with MUSE or any other acceptable Ministry of Finance accounting system in order to reduce complaints from suppliers related to late payments...”

Mtei, 27 June,
2022

The findings are contrary with other studies including that of Chatterjee & Kumar (2020) who conducted the study with the purpose of identifying the factors that would help the Small and Medium Enterprises (SMEs) of India to adopt Social Media Marketing (SMM) mechanisms for improving their business impact. The results highlighted that the facilitating conditions had no significant impact to the use of SMM by SMEs. Also, Talukder *et al.*, (2020) in their study which aimed to predict antecedents of Wearable Healthcare Technology (WHT) acceptance by elderly: The findings were surprisingly revealed that, there was no any

significant relationship between effort expectancy and facilitating conditions with behavioral intention to use WHT by the elderly. Either, Vo Ngoc Hoi (2020) found out that Facilitating condition had no direct effect on learners' usage of Mobile Assisted Language Learning (MALL), representing a departure from the literature.

Conclusion

The research objective was to ascertain the influence of practitioners' behavioural intention towards effective application of TANEPS in underperforming public organizations in Tanzania. Specifically, the study evaluates the impact of effort expectancy towards effective application of TANEPS, examine the social influence towards effective application of TANEPS and assess the facilitating conditions towards effective application of TANEPS in Dodoma City Council, Bahi District Council and Roads Fund Board. The motivation for the study was because there was circumstantial evidence showing that many Public Entities (PEs) in Tanzania despite of being connected to the TANEPS, they are not effectively applying it in their day to day procurement activities. The study revealed that, effort expectancy is positively affect effective application of TANEPS in Tanzania. In addition, the study revealed that social influence is negatively affect effective application of TANEPS in Tanzania. Likewise, the study revealed that facilitating conditions is positively significant affecting effective application of TANEPS in Tanzania.

Basing on the findings of the study, recommendations are addressed in this paragraph. It was found that, effective application of TANEPS is strongly affected by unavailability of sufficient resources and support for individuals to use technology. Therefore, is recommended that managements in public organizations, to ensure that sufficient ICT resources and staffs are available in order to attain smooth application of TANEPS. PPRA, on its part, should ensure that TANEPS is being sophisticated and system availability network is stabilized. Also, it should strengthen TANEPS help desk and integrate the system with other vital related government system like MUSE, GAMIS, GIMIS. This will eliminate the problem of complexities associated with the use of the system, as well as limited/overloaded network problems. Also, will ensure a timely technical support and a better link for retrieving and/or sharing of information among related systems respectively. Either, is recommended that, the government could provide incentives in terms of ICT devices (both software and hardware), funding the construction of ICT infrastructures, sponsor the tailor made trainings to its entities, especially to those

underperforming in order to motivate the practitioners so as they could comply with the use of TANEPS.

The study also proposes the areas for further research. The study suggests further study to consider the moderation effects of age, gender, experience and voluntariness of use stated in UTAUT theory as demographic characters which are said to define the strength of predictors on intention to use a technology. Also, further study to be conducted when e-contract management module is full automated in TANEPS and used by all public entities, currently e-contract management module is in piloting stage accommodate only nine public entities. Lastly, the study suggests further study be conducted by comparing well performing public entities against the underperforming public entities in order to determine the strengths and weaknesses public entities have towards effective application of TANEPS.

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Influence of Non-Performance Loans on The Financial Performance of Listed Commercial Banks At DSE

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Abstract

Credit risk management plays a great role in the financial performance of commercial banks not only in developing countries but also in developed countries. The proxies that measure credit risk is non-performing loans (NPLS), The study examined the relationship between NPLs and the financial performance of commercial banks in Tanzania. The study adopted a causal research design, where purposively sampling was used to select NMB, CRDB MKOMBOZI, MAENDELEO and DCB as a sample for the study. The study utilized secondary data from 2013 to 2020 secured from DSE. Using template collection. The study adopted descriptive statistics, correlation matrix for a relationship, bound cointegration for a long-run relationship, granger causal test for causal relationship and error correction model. The study findings revealed that found a strong there is a negative correlation between financial performance and non-performance loans. The study concluded that there is an existence of long-run movement between the selected variables and financial performance. In addition to that, unidirectional between the non-performing loans and financial performance of NMB, CRDB, MKOMBOZI, MAENDELEO and DCB were found. The researcher recommended that commercial banks listed at DSE should have a minimum non-performance loans. While the topic was helpful, there is a need to conduct an inclusive study for all banks in Tanzania.

Keywords: Non- Performing Loans, Financial Performance, Commercial Bank, DSE, Tanzania

Introduction

Credit risk management is very crucial for any financial institution to support financial performance (DGL, 2015). It is one of the challenges that lead to poor financial performance that causes bankruptcy (Olokoyo et al., 2021). Some commercial banks perform under loss due to credit risk management. Empirical evidence revealed that the term risk is used interchangeably with indistinctness which refers to the arbitrariness of proceeds linked with an exacting asset. According to Nyansio (2020) risk to a monetary foundation means the detectable uncertainty related to some stages. Loan risk is the risk that a borrower defaults and does not observe his or her answerability to service amount overdue (Nshala, 2017).

Based on Rahman et al. (2022) highlighted the roles of the stock exchange congruent to the role of DSE to the 9 financial companies as declared by DSE (2022) which include: - (i) To coordinate the preparation of the medium-term corporate strategic budget (ii) To ensure effective application of the DSE's financial management policies and procedures, (iii) To prepare and review budget guidelines and other policy documents in consultation with the Manager Finance and Research (iv) To prepare draft DSE budgets in consultation with the Finance and Research Manager, (v) To undertake research activities on stock markets matters. (vi) To prepare DSE internal and external operational and other relevant reports, (vii) To establish and maintain in accordance with accepted principles, all financial records and related documents of the DSE, (viii) To facilitate the auditing of the DSE books of accounts by both the internal and external auditors, (ix) To prepare of financial reports, interim reports required by management for appropriate decision making, (x) To review financial budgets and cash flow projections, (xi) To protect DSE assets through internal control and by securing proper insurance coverage.

(xii) To carry out any other job as specified in the DSE Scheme of Service and those assigned by the immediate Supervisor and (xiii) Participate in other assignments as may be directed by management from time to time.

Previous studies done in Brazil, Mexico, Uruguay, Argentina, Canada and Chile, revealed that capital adequacy, loan loss provision, liquidity and non-performing loans are issues that affect credit risk in commercial banks that cause poor financial performance (Shahid et al., 2019; Olokoyo et al., 2021). Nyansio (2020) conducted a study in Nigeria based on investigate the credit risk management of commercial banks and financial performance. It was revealed that

loan loss provisions, capital adequacy and NPLs have an association with financial performance with P- Value (0.001), (0.003), (0.002) and (0.000) respectively.

Studies conducted in world countries such as South Africa, Ghana, Kenya, Malawi, Zimbabwe, Nepal, Singapore, Finland and India linked loan loss provision, liquidity, capital adequacy and NPLs with the financial performance of commercial banks. These variables were found to be significant factors affecting the financial performance of commercial banks in those countries. Enoch et al. (2021) used panel data research design to assess the effect of credit risk management on financial performance in East Africa countries (Burundi, Rwanda, Kenya, Tanzania and Uganda) commercial banks found that NPLs and loan loss provision has a significant effect of the financial performance of the commercial banks.

Financial institutions struggle with the management of risk by introducing the risk and compliance department that is responsible to manage and control associated risk at an acceptable level example; NMB, CRDB, DCB, MKOMBOZI Bank and MAENDELEO Bank are the banks that introduced credit risk management department. Financial institutions have faced complexity over the years for many reasons, the main cause of solemn banking challenges carry on to be directly linked to careless credit attitude for counterparties and borrowers due to failure to confirm loan performance standards, to formulate good loan policies, deficient lending requirements, or lack of contemplation to changes in economic, deprived portfolio risk management, or extra situations that can direct to a weakening in the credit standing of a bank's counterparties (Sampath & Rasika, 2015). NPLs are created from not careful measures used in loan risk and commercial governance evaluations, lack of care in monitoring credit services superior, insider credits, lack of qualified workers and unaggressive loan collection methods (Getahun et al., 2015).

Literature Reviews

The studies in Nigerian banks revealed that there is a positive relationship between non-performing loans and financial banks (Lalon, 2015). Further, there is a positive relationship between non-performing loans and financial performance in Ghanian Banks (Paulino & Mwambia, 2018). Annor and Obeng (2017) examined the non-performing loans and financial performance at Ethiopian Commercial Banks and revealed that there is a positive association between non-performing loans and financial performance. The studies in South Africa banks

revealed that there is a positive relationship between non-performing loans and financial banks (Onkoba, 2014). The studies in Malawi banks revealed that there is a positive relationship between non-performing loans and financial banks (Mueni, 2019; Mustafa, 2019). The previous study done on Zimbabwe revealed that, there is negative connection between Non – Performing Loans (NPLs) and financial performance. The study concluded that when the level of NPLs is high cause the financial performance of the bank to be low likewise when Non- Performing Loans (NPLs) level is low cause the financial performance to increase (Kajirwa & Katherine, 2019).

According to Paulino & Mwambia (2018) revealed that, there positive association between Non Performing Loans (NPLs) and financial performance. The study concluded that poor supervision of central bank cause the NPLs to increase and hence cause poor financial performance to the commercial banks. The study recommended that the good practice of BASEL I and II is very important in order to increase financial performance of commercial banks.

According to Gizawet al., (2015) revealed that poor loan quality, high concentration of credit in certain sectors for example approximate lending and not careful loans principles have added majorly to NPLs' habit effort in collecting loans recording high costs of loan provisioning consequently, very much stirring their profitability performance (Kinyau, 2017).

The previous study done concerning profitability performance of the South African banking sector since 1994 loan risk management has a constructive result on both events of bank profitability performance, which is trustworthy with previous theoretical anticipation. Asset quality, shows a certain amazing correlation with Return on Assets (ROA), while its association with Return on Equity (ROE) is important and constructive as predictable (Bastomi et al., 2017). Kajirwa (2019) have established that Ghanaian bank profitability performance and risks management implied Ghanaian bank's profitability performance while the other factors of loan risk were established to be a connection to Ghanaian banks' profitability performance.

Thomas and Alabi (2014) studied the impact of credit policy on the performance of Nigerian Commercial Banks. This study linked prudent credit assessment and disbursement, dynamic credit monitoring and decisive actions to the quality of assets and level of profitability. Enoch et al. (2021) extended the work of Thomas and Alabi (2014) by assessing the effect of client appraisal on the efficiency of microfinance banks in Nigeria. Although, this study noted

relevant variables still is was based on the microfinance bank alone in Nigeria.

Improper credit risk management practices have been reported to have caused injurious economic effects on commercial banks in East Africa as the majority of the loan facility extended to borrowers became difficult to be repaid (Muriki, 2017; Muturi and Rotich 2016; Nelson 2012). This observation presupposes that NPLs levels available among various banks are related to poor management of credit risk practices. However, in these studied loan loss provisions and capital adequacy were not incorporated. Kipkirui and Omagwa (2018) studied a similar topic based on microfinance institutions in Nairobi Kenya. And noted a similar observation. Similarly, in cementing this sentiment, Githama and Gachanja (2020) linked the effects of credit appraisal methods on NPLs in public sector financial institutions. However, private institutions were ignored. It was further noted that it is important for the credit officers to concentrate on the credit policy, loan loss provisions (credit policy) and loan applicant appraisal system.

Method

Study Area

This study was conducted in Tanzania where five (5) commercial banks listed at DSE were considered for the study. The five commercial banks in Tanzania were selected depending on the accessibility of reliable data relevant to the listed commercial banks.

Design, sample size and sampling procedures

This study was opt panel data research design (cross sectional) while sample size was the financial statements of five (5) commercial banks listed at DSE. And sampling procedures was The study used purposive sampling procedures to select five (5) commercial banks out of 29 commercial companies listed at DSE in Tanzania whose financial statements were vital for the study at stake. The selection of five (5) commercial banks was based on their experience and the track record they have made to date in Tanzania. The study secured the financial statement from 2013 to 2020.

Methods of data and data analysis

This study used secondary data where time series annual data covering from 2013 to 2020 were gathered. The period ranging from 7 years to 20 years is chosen because are period used by the commercial banks listed from 2013. Commercial banks selected included NMB,

CRDB, MKOMBOZI, MAENDELEO and DCB. Non-performing loans, capital adequacy, and loan loss provisions from Bank of Tanzania (BOT) and financial performance data from the market. Secondary data was used due to the nature of the study which is panel data, in which large data sets can be analyzed, independently verified (more open to public scrutiny) and allowed for comparative studies, hence, providing a chance for replication. Ultimately secondary data are produced and published by experts in their respective fields hence tend to have high quality and become more reliable for analysis from which conclusion is drawn.

Results

Descriptive Statistics

Findings from Table 1 below show that the non-performing loans had the least mean (0.03878) compared to all other variables. Meanwhile, the same NPLs had standard deviation, minimum and maximum of 0.01921, and 0.0140.093 respectively. This implies that NPLs had a negative effect on the performance of commercial banks in terms of credit risk management. Contrastingly, the mean, standard deviation, minimum and maximum of capital adequacy were 0.6466, 0.1046, 0.422 and 0.851 respectively. Similarly, the mean, standard deviation, minimum and maximum of loan loss provision were 0.6512, 0.1106, 0.413 and 0.841 respectively. Furthermore, for ROA, mean, standard deviation, minimum and maximum were 0.6846, 0.0946, 0.423 and 0.841 respectively. Finally. for ROE, the mean, standard deviation, minimum and maximum were 0.6676, 0.0846, 0.423 and 0.781 respectively. Implied the findings from Table 1 show that independent variables had a significant effect on the credit risk management practice.

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
NPL	140	0.03878	0.0191	0.014	0.093
ROA	140	0.6846	0.0946	0.424	0.832
ROE	140	0.6676	0.0846	0.423	0.781

Source: Research Findings, 2022

Lag Test

Table 2, shows that the maximum lag for revenue was lag one since it has the lowest AIC, HQIC and SBIC as compared to all values at a different number of lags and lastly budget has

maximum lag one since it has the lowest HQIC and SBIC although the AIC at that lag does not have the lowest value.

Table 2: Lag Test

Variables	Lag	FPE	AIC	HQIC	SBIC
Financial					
Performance					
ROA					
	0	0.011128	-1.66746	-1.54519	-1.61824
1		.002723*	-3.06845*	-3.23751*	-3.9836*
2		0.002863	-3.91832	-2.77252	-2.89165
ROA					
0		0.000381	-5.0458	-5.12053	-4.99357
1		0.000143	-6.21278	-5.98325*	-4.92834*
2		.000143*	-6.1517*	-5.96237	-5.8885
NPL					
0		0.000381	-5.0558	-4.02153	-4.99357
1		0.000143	-6.03278	-5.98325*	-5.92834*
2		.000143*	-6.02517*	-5.96937	-5.8885

Source: Research Findings, 2022

Testing for Stationarity: Augmented Dickey-Fuller (ADF) Test. In this test, the following hypotheses were formulated.

H0: The time series is non-stationary or there is a unit root.

H1: The series is stationary or there is no unit root.

Before estimating the Autoregressive distributed lag model, Level model and Error Correction Model (ECM), it is always recommended to assess the panel properties of the data in order to determine whether data are stationary or not (Creswell, 2014) Therefore, both Phillips - Perron (P-P) and Augmented Dickey-Fuller (ADF) tests were performed in order to determine the presence of the unit root.

Table 3 shows the ADF test and PP test results for Revenue and budget. All variables were non-stationary in the level form at 5% levels of significance. On the other hand, after the first differences, all variables were stationary at 5% levels of significance. Therefore, these

variables were integrated into order 1(1).

Table 3: Test for Stationarity Both Augmented Dickey-Fuller Test and Phillips Perron.

ADF Test					
Variables	Level		First difference		order of integration
	Test statistics	Critical value	Test statistics	Critical value	
ROA	-1.398	-2.952	-4.875	-2.955**	I(1)
ROA	-1.398	-2.952	-4.875	-2.955**	I(1)
NPL	-1.741	-2.952	-5.069	-2.952**	I(1)
The PP Test					
Variables	Level		First difference		order of integration
	Test statistics	Critical value	Test statistics	Critical value	
ROA	-1.582	-2.930	-6.978	-2.952**	I(1)
ROE	-1.572	-2.950	-6.978	-2.852**	I(1)
NPL	-2.290	-2.250	-7.602	-2.852**	I(1)

Source: Research Findings, 2022

Before determining whether they have a long-term relationship (co-integrated) or they do not have a long-term relationship (not co-integrated) it is essential to determine the maximum number of lag for the overall variable in order to include it in the test of Johannes's cointegration test (Hill *et al.*, 2011). Table 4 shows the maximum lag for all variables was lag one since at that lag it has the lowest AIC, HQIC and SBIC compared to all other values at the different number of lag.

Table 23: Lag Test for Overall Variables (ROA, ROE, NPL, CA and LLP)

Lag	FPE	AIC	HQIC	SBIC
0	3.60E-06	-6.8698	-6.8393	-6.7854
1	4.1e-07*	-9.04176*	-8.95016*	-8.78843*
2	4.30E-07	-8.9866	-8.834	-8.5644
3	4.90E-07	-8.8698	-8.6561	-8.2787
4	5.20E-07	-8.8103	-8.5356	-8.0503

Source: Research Findings, 2022

The cointegration test is always employed to determine whether the variables have a long-term relationship. The cointegration test is always performed after testing the stationarity and determining the optimum number of lags for all overall variables. This is the cointegration test which is always performed in order to suggest the appropriate model be adopted between error corrections models (ECM), long run equation with least squares and autoregressive distributed lag model.

In this objective, Johansen's test for Co - integration was employed since the variable was integrated at order one which implies that the order of integration was homogeneous for all variables I (1). Therefore, the results in Table 5 show that the variables were not co-integrated since the test statistics for trace statistics and max statistics were less than their critical values so the null hypothesis was accepted there was no cointegration. This implies that there was no long-term relationship between independent variables of choice (non-performing loans, capital adequacy and loan loss provision) and the financial performance of commercial banks because p values are greater than 0.05. On the other hand, the financial performance of commercial banks has a positive relationship with the previous year's financial performance but not with the non-performing loans.

This implies that there was no long-term relationship between non-performing loans and the financial performance of commercial banks because p values are greater than 0.05. On the other hand, the financial performance of commercial banks has a positive relationship with the previous year's financial performance but not with capital adequacy.

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relationship with the previous year's financial performance but not with the loan loss provisions.

Table 24: Johansen's test for Cointegration (long run relationship)

Null Hypothesis	Trace Statistics	Critical Value	Max Statistics	Critical Value
$r = 0$	11.1365*	15.41	9.901	14.07
$r \leq 1$	1.2355	3.76	1.2355	3.76

H₀= No cointegration test

Source: Research Findings, 2022

Table 25: ARDL Short Run Estimates for financial performance (Autoregressive distributed lag model)

<i>Financial Performance</i>	<i>Coef.</i>	<i>Std. Err.</i>	<i>T</i>	<i>P>t</i>
ROA				
L1.	0.8727532	0.0835646	10.44	0.000***
ROE				
L1.	0.8727532	0.0835646	11.44	0.000***
NPL	0.0735325	0.4627455	0.14	0.175
Cons	0.0843087	0.0503213	1.88	0.102

R² = 0.7647, F- value = 65.00, P < 0.001, ** Significant at P< 0.05 and *** = Significant at P < 0.01

Source: Research Findings, 2022

Table 7 shows the result for the auto correlation test, since the null hypothesis state that there is no autocorrelation, therefore the data does not suffer from the problem of autocorrelation. The p-value for the Breusch-Godfrey LM test for autocorrelation was greater than 0.05 so the null hypothesis was not rejected. Results for Durbin Watson d-statistic suggest the same since the Durbin -Watson is approximate 2 (Durbin-Watson d-statistic (3, 43) = 2.041144).

Fixed Effect Model Regression Analysis

Results from Table 7 shows the output for the fixed effect model employed to examine the influence of non-performance loans on the financial performance of listed commercial banks at DSE. Findings in Table 7 below shows that independent variables included in the model were good predictors of financial performance. About 54.6 % of variations of ROA and ROE were explained by the explanatory (endogenous) variables included in the model which were NPLs, capital adequacy and loan loss provision mean while the remaining portion (44.4%) was explained by the exogenous variables which are beyond this study. The findings also showed that the explanatory variables in the model had a significant effect on ROA & ROE when taken together ($P < 0.001$). The predictor variables (NPLs and lag NPLs) significantly influenced financial performance in commercial banks listed in DSE. The implication of these findings is when non-performing loans increase cause financial performance to decrease and when the non-performing loans decrease cause the financial performance to increase. These findings were in line with the findings of Ljube (2017) in the Republic of Macedonia found that there is a correlation between the NPLs ratio of non-financial entities and profitability indicators (ROA and ROE) showing a moderately high negative correlation whereas regression analysis showed that increasing the NPLs ratio reduces the bank profitability.

Table 7: Regression Results for Fixed Model

	Coef.	St.Err.	T- value	P- value	[95% Conf	Interval]
Financial Performance						
NPLs	-0.049	0.017	-2.82	0.005	-0.015	0.083***
Lag NPLs	0.010	0.004	2.57	0.010	0.002	0.017**
Constant	1.219	0.279	4.37	0.000	0.672	1.766***
Mean	0.674	SD dependent var				0.168
dependent var						
R-squared	0.545	Number of obs				2182.000
F-test	8.126	Prob > F				0.000

Akaike crit. (AIC)	-1549.266	Bayesian crit. (BIC)	-1523.849

*** p<.01, ** p<.05, * p<.1

Source: Research Findings, 2022

Discussion

Discussion of the findings

Findings from Table 12 show that Profitability was 0.01 ($P < 0.01$) with a negative relationship to financial performance with a regression coefficient of -0.049. This implied that each one percent increase in NPLs produced a decrease in ROA and ROE by 0.049 %. Lag NPLs were significant ($P < 0.05$) and had a positive relationship between ROA and ROE with a regression coefficient of 0.010. This had the implication that each unit increase in percent in lag-NPLs led to an increase of ROA & ROE by 0.010%. This observation is congruent to the conclusion of Chang et al. (2022) in China who associated the decline of profit in financial institutions with capitalization, bank size, poor governance and NPLs.

This implies that the negative relationship between NPLs and financial performance indicates that commercial banks prefer to use clean loans for supporting long-run investments. The results from the analysis depict that total loans should be high and clean loans, and prefer to use their retained profit to acquire new investments.

The portfolio theory of NPLs suggests that if an organization is to be low in order to create profitability, finance would be most probable to come from internal relatively to external sources. Therefore, commercial banks face a high level of NPLs that cause poor financial performance the findings are supported by different scholars who said that the NPLs cause poor financial performance (Mueni, 2019; Mustafa, 2019). Also, the high number of non-performing has been caused by poor loan appraisal, weak collateral and loan policy relating to the commercial banks and hence cause the commercial banks to fall bankrupt. Furthermore, other previous findings contradict with this study by explaining the major cause of NPLs is poor loan product and nature of borrowers. The implication of NPLs to the bank is bankrupt and when the bank is not working efficiently economy of the country will be impaired.

Conclusion, Implications and the area for further Research

Findings from Table 7 show that Profitability was 0.01 ($P < 0.01$) with a negative relationship to financial performance with a regression coefficient of -0.049. This implied that each one percent increase in NPLs produced a decrease in ROA and ROE by 0.049 %. Lag NPLs were significant ($P < 0.05$) and had a positive relationship between ROA and ROE with a regression coefficient of 0.010. This had the implication that each unit increase in percent in lag-NPLs led to an increase of ROA & ROE by 0.010%. This observation is congruent to the conclusion of Chang et al. (2022) in China who associated the decline of profit in financial institutions with capitalization, bank size, poor governance and NPLs.

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Recommendation to Government and Authority Responsible. The bank of Tanzania (BOT) should supervise the operations of microfinance commercial banks to increase capital adequacy, reduce NPLs and provide the good loan loss provisions by providing quality directions to commercial banks. Supervision of BOT shows that NPLs, Capital adequacy and LLP are not extensively, there was weak supervision, thus requiring BOT to strengthen supervision of the commercial banks in Tanzania.

Recommendation to Policymakers: The policymakers such as the parliament and councilors should formulate suitable laws and regulations that can direct the financial institutions to

operate well for the increase in the financial performance of the banks. Therefore, the parliament and councilors ought to formulate new laws and regulations for commercial banks in Tanzania.

Recommendation to the International Financial Institutions. The best practice of the BASEL I and II committee that guides the bank performance of Tanzanian banks is very important to augment bank performance. The IMF and WB framework shows that NPLs, CA and LLP are not well supervised. This requires commercial banks to ensure compliance with the international framework concerning financial institutions to the commercial banks.

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Applying love and logic behaviour management approach in managing pupils' classroom demeanours in Tanzania Primary schools

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Abstract

This study assessed how teachers apply love and logic behaviour management approach in managing pupils' classroom demeanor cases in primary schools. The study used a qualitative approach with the support of interviews and classroom observations. The simple random and purposive sampling techniques were used to select five primary schools and 30 class teachers from the government-owned primary schools within the Dodoma City Council. Data were thematically and quotes analyzed for research questions. Findings show that the love and logic behaviour management approach is a new approach, and its practice is still undeveloped as it is characterized by inattentiveness, punitive strategies, weak pupil-teacher relationship, and poor school mentorship programs. Besides, the findings from the reviewed literature show that the love and logic model has got stable roots in the pre-service teacher education curriculum and in-service teacher training where they learned the approach working framework in schools and successfully applied in managing pupils' behaviours. Applying this model would help teachers to have divergent or alternative ways of dealing with pupils' disciplinary problems in their classroom and the entire school's whole as a substitute for corporal punishment for pupils who make mistakes.

Keywords: Love and logic, behaviour management, pupil discipline

Introduction

Introduce the Problem

Studies across the globe show that the appliance of love and logic behaviour management approach is vital and is inevitable in managing pupils' classroom behaviours in schools (Majani, 2020; Kambuga, 2017; Marttella, Nelson, Marchand-Martella, and O'Reilly, 2012; and Westling, 2010). Either, Majani (2020) and Kambuga (2017) presented that, despite the vitality and the practice inevitability of the love and logic behaviour management approach, the Tanzania education sector faces an acute need to strengthen school-based training

programmes for teachers on the use of love and logic in managing pupils' classroom behaviours. Kambuga (2017) argued that managing pupils' classroom behaviours is one of the critical aspects of school life, and for the last five decades, the management of pupils' classroom behaviours in schools has been and still is the role of the classroom teachers. Correspondingly, Majani (2020) added that just like any other lesson, appropriate behaviours in classrooms should be taught and nurtured, not simply demanded. This paper looked forward to assessing how pupils' classroom behaviours are taught and nurtured in classrooms by applying the love and logic approach. Besides that, the concept of love and logic and their originality are critically discussed.

Love and Logic Management Approach

Jim Fay and Foster Cline first formalized the love and logic model in the 1980s when the love and logic institute was formed in the USA (Cline and Fay, 2006). In their book titled *“parenting with love and logic: Teaching children responsibilities”* the book recalls that parenting can either be a joy or a nightmare, such that a wise child loves discipline but a scoffer does not listen to rebuke. They argued that parents and teachers have the significant responsibilities to train children in the right way and when old, they will not stray (Cline and Fay, 2006). This book presents the root of developing the love and logic model. Cline and Fay (2006) argue that the theoretical and empirical roots of love and logic stem from two areas: studies examining basic principles of learning and conditioning, including cognitive, human emotional needs and their relationship to motivational and social learning theories of Vygotsky (1978); Bandura (1977); Pavlov (1927); Rescorla (1988); Thorndike (1905); Skinner (1953); Watson & Reyner (1920); Glasser (1969); Maslow (1954); Rogers (1961).

Love and logic are the behaviour management strategies that help teachers manage pupils' classroom demeanours cases. The model also intends to teach pupils to think for themselves, take responsibility, and prepare them to function effectively in a society filled with temptations, decisions, and consequences (Fay & Funk, 1995). Therefore, the role of teachers in this approach is to create a best-fit environment in which pupils are empowered to take control of their behaviour. To achieve this, teachers must address pupils' classroom indiscipline cases by helping pupils find problems with their actions and guiding them (pupils) in deciding how to resolve such problems. Fay and Funk (1995) identified three teaching styles, such as helicopters, drill sergeants, and consultants, as a way of helping teachers in

managing the classroom and create a suitable environment in which pupils have the responsibility and power to make decisions regarding their behaviours. Through *helicopter style*, a teacher hovers over pupils, guides them precisely, and swoops to rescue them from any hint of failure. Marttella et al. (2012) and Gantt (2017) assert that helicopter teachers pose threats, take on the responsibilities of pupils, make decisions for pupils, and use guilt to get pupils to behave confidently. This type of teaching may create pupils dependent on teachers for all aspects of learning and development. The *drill sergeant style* allows teachers to set rules, issue orders, and punish pupils who violate the rules in schools or classrooms. The drill sergeant teachers have very rigid demands and are quick to provide punishment that inflicts pain and humiliation on their pupils instead of learning and correcting their mistakes (Marttella et al., 2012).

Unlike the helicopter, the *consultant style* allows teachers to give advice and guidance to pupils and enable them to make decisions of their own choice. Teachers provide a message to pupils that they can solve their problems. Thus, a teacher is there to help pupils solve their problems, not solve them. Love and logic are built upon four main principles (Fay & Funk, 1995). The first principle is pupils' self-concept, i.e., a teacher must help pupils who have a poor self-concept to find what strengths they have and how they can go about using them. The second principle is related to share control, i.e., teachers have control of the classroom and allow pupils to have a choice. The third principle illustrates that consequences must be presented with compassion, empathy, or understanding rather than anger. In this regard, teachers should allow pupils to be involved in decision-making and develop a new behaviour plan. The fourth principle believes that thinking needs to be shared because a teacher has to use less powerful words or phrases and more questioning to prompt pupils thinking (Fay, Cline & Charles, 2001; Troike, 2013; Wolfgang, 2005). Once these principles are effectively observed, they would build a more harmonious relationship between teachers and pupils and minimize pupils' misbehaviours (Fay & Funk, 1995). These principles also go hand in hand with the essential skills of love and logic approach that teachers need to demonstrate in the classroom and school environment to create a positive relationship with the pupils. These skills are summarized in table 1.1 below.

Table 1.1: Showing the love and logic essential skills against pupils' actions and teachers' activities and responses

Love & logic skills	Pupils' actions	Teachers' activities and responses
Neutralizing arguing	Pupils learn boundaries and how to argue respectfully with teachers	Teachers do not think in wholeness about what a pupil is saying.
Delayed Consequences	Pupils anticipating the consequence of their behaviours	Teachers use sentences such as, "Oh, no and take action later or immediately
Empathy	Pupils stay out of the fight and think before acting.	Teachers deliver a consequence; they start their conversations with genuine empathy that tells a pupil, "I care about you
The Recovery Process	pupils learn that in the classroom they should not cause difficulties for others to learn or for the teacher to teach	Pupils who are disrupting the learning of others or the teacher's teaching are sent to a different area so that the classroom environment is continued and the misbehaving pupils can continue to work.
Developing positive teacher-pupils relationship	pupils and teachers develop strong, positive relationships since teachers are strict but caring	Teachers use the one-sentence of intervention before the problems get out of hand. A teacher may be saying I "noticed that" and ignoring the pupil
Setting limits with enforceable statements	pupils learn that there are reasonable limits that are enforceable	Teachers never tell pupils what to do; instead, they tell pupils what they will do or will allow
Using choices to prevent power struggles.	Pupils are given small choices that allow them to feel appreciated and be more willing to comply with teacher requests.	Teachers use appropriate choices like, should the test be on Tuesday or next Friday? Teachers need to be strategic so that pupils feel it is fair and is involved in making the choice
Quick and easy preventative	pupils learn to discipline themselves	Teachers use interventions before consequences are needed. Teachers may

Love & logic skills	Pupils' actions	Teachers' activities and responses
interventions		say, "will you stop that."
Guiding pupils to own and solve their problems	Pupils can solve problems without resorting to fighting and back-talking.	Teachers act as consultants with pupils, understanding their feelings but not rescuing them from their problems or bad choices.

Source: (Fay & Fay, 2012; Coffin, 2013)

Explicitly, the love and logic behaviour management approach encourages teachers' to express empathy when pupils violate the rules and tailor consequences to meet the needs of individual pupils. Fay, Jim, and Funk (1995) value children and place a heavy emphasis on the importance of treating them with respect and dignity. They argued that successful teachers know that they must build a positive relationship with their students because they cannot make children do their best by being angry with them. Therefore, the present study envisioned assessing the extent teachers in primary schools apply the three teaching styles of consultant, drill sergeant and helicopter as well as essential skills advocated in the love and logic management approach in mitigating pupils 'disruptive behaviours in the classrooms.

Research Questions

1. What are the common classroom indiscipline cases involving pupils in primary schools?
2. How helicopter, drill-sergeant and consultant management styles are applied by class teachers in managing pupils' disciplinary cases?
3. How far do primary class teachers apply love and logic skills in managing pupils' classroom indiscipline cases?

Method

Study Approach

The study adopted the qualitative research approach in assessing the applicability of love and logic in managing pupils' demeanours. Lodico, Spaulding, and Vogetle, (2010) bounded that, the focal point of qualitative research is to give voice to the perceptions and feelings of participants in a study. This study was conducted in the natural setting of the participants

familiar with the information that is sought. The researchers visited participants in their natural setting (classrooms) and conducted face-to-face interviews and case observation with the teachers (Jonker and Pennink, 2010; Walliman 2011; Yin, 2014). Thus, the researchers conducted case observations in five classrooms to see how teachers apply love and logic teaching styles and essential skills in managing pupils' classroom disruptiveness cases.

Research Design

The study used a single case study research design. Creswell (2014) adds that a single case study design describes the commonality of meanings for different people of a particular lived experience. The design enabled researchers to grasp in-depth information on teachers' experiences on the appliance of love and logic behaviour management approach in managing pupils' classroom indiscipline cases. In that case, the love and logic behaviour management approach in managing pupils' classroom indiscipline cases is a case for studying. Although there is limited information regarding how the love and logic behaviour management approach is applied in managing pupils' classroom indiscipline cases in Tanzania for both primary and secondary schools.

Sampling, Sample Size, Power, and Precision

As an initiative towards providing access to this vital information, the answers of the study questions involved field activities. As the first educationally expanding region in Tanzania, the study was conducted in the Dodoma region. The region was chosen for being among the top regions in Tanzania and mentioned to have a considerable number of schools with many teachers from different diversities and pupils from different backgrounds. The study focused on assessing five (5) primary schools within the Dodoma City Council. The choice of the City study area is based on the existence of a big number of diverse teachers deployed within the city following the Government shift from the business City of Dar-es-salaam. The schools under the study were chosen randomly from the source list that were provided by the District Primary Education Officer (DPEO). The DPEO of Dodoma City provided the list of primary schools that helped to ease access to targeted informants in close geographical proximity. The study restricted investigation to primary class teachers of standards IV, V, VI, and VII. These classes were selected from the viewpoint of the researchers that to some extent are aware of school discipline codes. This sample size was representative of the population to ensure that the findings to some extent can reflect the prevailing situation across the country. The

assessment involved consulting 30 classroom teachers who were purposively selected. In practice, class teachers are responsible for receiving and nurturing pupils to acquire necessary classroom behaviours.

Methods of Inquiry and Analysis

The study employed two methods of data inquiry such as interview and classroom observation. The interview protocols were made with open-ended guiding questions to 30 class teachers, which reflected the research-specific questions. The digital recorder device and notebooks were used to record verbal statements given by individual respondents during interview sessions to capture the actual admission of the interviewee. Both digitally recorded and written notes in the notebook aimed to keep accuracy and maintain the authenticity of the information. The classroom observation was guided by the love and logic self-control tools developed by Fay and Funk (1955) to see how teachers apply love and logic teaching styles and essential skills of the approach in teaching and learning process. The collected data was transcribed from a digital recorder to written form in the notebook. The collected data were thematically paraphrased as the sub-headings, and the related issues under the paraphrases and other presented in quotes formed the points of interpretations, discussions, and conclusions

Results and discussion of study findings

Common primary pupils' classroom indiscipline cases in schools in Tanzania

The first study question inquired about the familiar pupils' misbehaviours in classrooms as observed by the thirty (30) participants involved in the study. The findings show that managing pupils' discipline problems is one of the most challenging aspects of a teaching career. The responses show that pupils' discipline problems were of two types, i.e., minor and major.

The identified minor primary pupils' classroom indiscipline cases

The identified minor indiscipline cases among pupils were classroom noise, late coming to school, the improper wearing of the school uniform, bullying, verbal abuse towards fellow pupils, provoking prefects, sleeping in the classroom during a lesson, laziness, and failure to complete school assignments. Table 1.2 below elaborates on the frequency of respondents against the classroom disciplinary cases involving minor cases reported by classroom

teachers.

Table 1.2 Teachers' reported frequency of minor disciplinary cases

Teachers' report cases	Minor classroom in disciplinary cases
12	Making noise in the classroom
16	Coming late to the classroom
21	Wearing school uniforms improperly in the classroom
20	Bullying fellow pupils in the classroom and outside classroom cases
11	Using verbal abuse towards fellow pupils during classroom sessions
9	Provoke prefects in the classroom
27	Sleeping in the classroom
24	Laziness and failure to complete classroom assignments

The analysis and discussion of the findings show that of all the disciplinary cases reported, the cases of pupils sleeping in the classroom were the most reported, with 90% of the respondents reporting the incidences. In a review of the interview records, one teacher said:

“Dodoma is one of the hottest regions....you can imagine pupils' situation, particularly in the afternoon hours, they always all go asleep in the classroom, and I do; wake them up all season time”

During the interview, the teacher's statement justifies many teachers reporting pupils sleeping in the classroom as a minor disciplinary case. They claimed that the region is too hot, which automatically makes pupils go sleep in the classrooms, and this is a minor disciplinary case and familiar to many pupils in schools under the study. Furthermore, the teachers reported that they remedy this by fixing critical lessons in the morning to manage the situation. Other cases reported by many teachers involved pupils failing to finish the classroom assignments within the time frame scheduled by the teachers; with this, over 80% of the respondents reported this. The least reported minor disciplinary case was the pupils provoking the classroom perfectly, with only 30% of the teacher's respondents. The class teacher reported this:

“You know I am so much concerned with the class assignment because it is the major role in managing pupils, in case the head of school hears pupils making noise. I am the first to be

asked, and that is why I am so much concerned with them by encouraging teachers to provide homework yet the majority fail to finish because time is scheduled for classroom activities”

The identified major disciplinary cases among pupils

The identified major disciplinary problems included physical fighting, hitting or threatening teachers, stealing, cheating in the examination, using mobile phones, destroying school property, substance use such as alcohol, cigarette, marijuana, other illicit drugs, and early sex relationship. Table 1.3 below elaborates on the frequency of respondents against the classroom disciplinary cases involving major ones.

Table 1.3 Teachers’ report frequency major disciplinary cases

Teacher Reported Cases	Major classroom disciplinary cases
21	Fights with fellow pupils in the classrooms
7	Physical fighting, hitting, or threatening teachers
10	Stealing classroom properties
18	Cheating in the examination
2	Illegal use of the mobile phone in the classroom
16	Destruction of classroom property
3	Substance use such as alcohol, cigarette, marijuana, other illicit drugs
9	Engaged in early sex relationship

The interviewed teachers reported pupils fighting, examination malpractice and destruction of school property to be the major common demeanours case. A teacher said:

“Nowadays pupils fighting is a daily experience. I have reached a stage to let things go in their way....because every time the class monitor are coming to tell me so and so are fighting in the class....how many pupils will be expelled if we decide to use the school rules...but for serious fights, we take action of expelling them for 21 days as directed by the Ministry concerned with education”

Another teacher mentioned:

“Cheating is a normal thing it is taxing for a teacher to supervise internal assessment alone of the class with 80 pupils. Although we know that cheating is a big discipline cases but because of the class size we ignore to take strong major. Just I end telling them stop cheating a will pull you out the examination room”

The analysis in all observed minor and major pupils’ indiscipline cases, tells that the role of the teachers is to reduce the use of punishment on each mistake made by pupils and leading them to a problem-solving process which is an effective means of changing pupils’ behavior, and providing choices that can aid in their development as responsible individuals. Pupil’s mistakes must be coupled with love and empathy from their teachers and teachers should avoid the use of threats and frequently warnings and holding pupils accountable bring a positive feedback in managing classes.

Pragmatic of the three teaching styles with respect to pupils’ behaviours

In the school setting, teachers are responsible for pupils ‘learning and behaviours stemming from the principle of acting in "loco parentis." Teachers are there to ensure pupils achieve their goals by leading them to problem-solving and career choices (Fay & Funk, 1995). Given this, teachers were asked if they knew the love and logic management approach and its teaching styles. Results indicate that all the interviewed teachers were not aware of the approach, although most of them claimed to implement these styles in the classrooms (schools).

Helicopter Style

The results show that the majority of the teachers in primary schools apply the helicopter style naively. This approach is commonly applied to pupils, especially those approaching national examinations. Teachers use this style to ensure that pupils are performing better in their examinations to offer the satisfaction of government officials. A teacher said:

“When approaching national examinations, those classes of examination such as standard four and seven are given special care. We have remedial classes for these pupils, and sometimes we solve the previous national examination papers to ensure that none fail the examinations”.

The support provided to pupils those their classes approaching national examinations by their teachers contradicts government guidelines on the competency-based curriculum of 2005, which requires pupils to demonstrate knowledge and skills to function proficiently in the community (Komba & Mwandaji, 2015). For example (2012) stresses that a competency-based curriculum seeks to develop pupils' learning ability and work independently and with other pupils. Fay & Funk (1995) insist that the tendency of teachers to hover over pupils may lead to pupils being irresponsible, and pupils may find it difficult to solve their problems as they will continue to be dependent even in their adult age.

Drill Sergeant Style

The study analysis shows that primary schools in Tanzania have a list of rules and regulations to which all pupils must adhere. Failure to obey these rules and regulations is considered a violation, and pupils have to be punished. Results show that teachers were using threats and punishments, including corporal punishment and others like mopping the toilet, slashing grass, and watering the garden for pupils who violated a list of school rules. As one teacher quotes:

"If you are not strict and carrying sticks in the classroom, these pupils will not understand you, they will not stop disrupting the class and you will not teach anything for that day"

This claim appeared to be valid because in all the five observed classrooms, the teachers had carried one or two sticks in their hands, and some were positioned on the teachers' tables. This scenario reflects the findings of HakiElimu on the Right children to Education in Tanzania (2011), which reveals that teachers in schools were too demanding and harsh to pupils, and pupils were beaten for almost any mistake or behaviour which sometimes just needed warning or counselling. The findings were also supported by Vishal (2005), who notes that drill sergeant teachers may result in unhealthy competition, fear, and anxiety among pupils as they lack freedom of expression, critical thinking, and creativity.

Besides, the study shows that pupils had no freedom to share their experiences with their teachers while teaching in the observed classrooms. Lack of freedom for pupils to interact with their teachers was linked to overcrowded classrooms. For example, all observed classrooms had 70–90 pupils. This number of pupils in the classroom was above the government guidelines of a 1:45 teacher-pupil ratio (URT, 2006). The study further found

that pupils in primary schools had no power in deciding their behaviour and choices because they were forced to take everything or do what their teachers wanted.

Consultant Style

A consultant teacher provides guidance and consultant services for all pupils in and out of the classroom. According to Hawley (1996), a consultant (counsellor) teacher tends to explain to pupils various school rules and decisions on their behaviours. A consultant teacher tends to be polite but firm and reprimands disruptive pupils. Notwithstanding, the study results revealed that consultation to pupils' in primary school was very minimal and the main reason mentioned by teachers was overcrowded classrooms. The interviewed teachers' claimed that it was taxing to counsel pupils in and outside the classroom due to the large number of pupils in a single class and the school in general. A teacher said:

"If I cannot move from one place to another in the classroom, how can I know individual pupils' problems and provide help"

Another quotes *"you were with me in the classroom, and you saw the situation in managing pupils' disruptive behaviours. If the situation is what you have seen by your eyes, how can I make a consultation for each pupil's problems"*

Correspondingly, the observed teachers in the classroom seemed to lack classroom limits, praise, and encouragement to their pupils, contrary to the love and Logic classroom approaches that require teachers to involve pupils in building a free mind and feel more proficient even after being disciplined.

Applied essential skills of teaching love and logic in primary schools

The study has taken into practice the extent to which teachers in primary schools were able to apply essential skills of love and logic suggested by Fay and Funk, (1995) in their classrooms and the entire school. The analysis shows that some teachers in schools were implementing love and logic skills unknowingly, while some were not aware of the approach they were using in handling pupils' behaviours in the classroom. Table 2 presents the summary of the classroom observation on the model's applicability, which reflects the skills advocated by Fay and Funk.

Table 26: Summary of Classroom Observation on Applying the Skills Advocated by Fay and Funk

The essential skills for love and logic approach	No of teachers applying skills	Observed application of the essential skills for love and logic in classrooms
Neutralizing pupils arguing	05	Teachers were observed limiting pupils from explaining the cause of the disciplinary acts in the classroom, some ignored pupils' arguments, and some were readily forgiving and only asking the pupils to forget and continue with other classroom activities. A statement was noted from teacher 5 that: "I know this pupil very well she cannot even argue though... she was just swan in by peers whom I have noted stubborn in the classroom". The pupil was just deprived of expressing her views because she was known by the teacher the much the teacher expressed
Delayed consequences	19	Teachers were observed not delaying in any consequence; they applied physical punishments like a slap, pulling pupils ears, and making them kneel in front of the classrooms
Empathy	23	Teachers did not use empathetic statements on pupils who made mistakes during classroom sessions. For example, teacher 4 was noted to utter statements to pupils "<i>Achenikelele nitawachapa</i>" is a

The essential skills for love and logic approach		No of teachers applying skills	Observed application of the essential skills for love and logic in classrooms
The recovery process		09	Swahili statement meaning “stop making noise. I will cane you”. Teachers were observed sending pupils to kneel outside the classroom and were not allowing them to return to the classroom until the session was finished. In some classes, pupils were sent to kneel in the school open ground, waiting for further punishments.
Developing relationship	teacher-pupils	23	Teachers were observed calling upon pupils to be friends. Some were noted being friendly to pupils to the extent of calling them for compromise after classroom sessions, like teacher 29 was noted stating in Swahili <i>‘wanangu hebu tukutane baada ya kipindi tuyasuluhishe haya, Mimi Nina Imani humu darasani Sisi wote ni marafiki na hatushindwi kitu wala hatugombani’</i> this statement means ' my children may we meet after this classroom session so that we square up all these messes, I believe we are all friends and we are not going to be defeated, neither are we going to fight one another again.
Preventive interventions		10	Some teachers applied preventive interventions for all sorts of disruptive behaviours presented before them, e.g., shouting, undermining, and not being

The essential skills for love and logic approach	No of teachers applying skills	Observed application of the essential skills for love and logic in classrooms
		willing to assist them in solving the prevailing problem situations fully. Teacher 26 was noted stating (in Swahili) to a pupil who had a case of classroom noise making: <i>“wewe usiniletee ujinga wako, sina hata mda was kukusikiliza”</i> this in its actual translation simply means, the teacher refuses to listen to the pupil and chases him away.
Setting limits with enforceable statements	26	Teachers were observed telling pupils what to do, and they were very demanding, for example, teacher 4 was noted commanding pupils that: <i>“Each pupil must take notes, or I will beat you if I find that you are not writing.”</i>
Using choices to prevent power struggles	28	Teachers were observed limiting pupils' choices and dictating involvement in classroom activities. Teacher 18 noted this: <i>“I have 128 pupils in this class of VID, the classroom is overcrowded, and the majority of students are dodging off weekly and monthly tests... I do not give them a choice for any reason to miss taking weekly and monthly tests, I insist and enforce the continuous assessment tests attendances”</i>. Pupils in classes were just told what to do, and they had to follow.
Guiding pupils to own and solve	30	Teachers used problem-solving techniques

The essential skills for love and logic approach	No of teachers applying skills	Observed application of the essential skills for love and logic in classrooms
the problems		on pupils with severe disciplinary problems and were sent to the staffroom. During the classroom observation, teachers' conflict meditations were not observed.

Conclusion and Recommendation

Fay & Funk, (1995) ascertained that the application of Love and Logic in the classroom supported teachers in controlling and reducing stresses of pupils' misbehaviours. The key strategies to implementing Love and Logic in the classroom are empathy and communicating that you care for and value the pupils. In improving teaching and learning process teachers should undergo training and workshops on Love and Logic in managing pupils' classroom behaviours and how to use alternative punishments. The interviewed and observed teachers were somehow aware of the approach but not using it correctly. This scenario might be due to crowded schools (classrooms) where teachers do not have enough time to concentrate on individual pupils. Despite the importance of the love and logic approach in helping teachers deal with pupils' disruptive behaviours, it was found that this management approach was a new phenomenon in their experience of managing pupils' behaviours. The purpose of "*love and logic*" is to instruct teachers on managing pupils' behaviours in the classroom by using three principles, i.e., teacher positive attention, pupils' choice in any situation, and asking pupils reflection questions.

Conversely, during classroom observation, teachers did not adequately utilize these three essential principles that can help teachers' better classroom management and allow pupils to be responsible for their discipline. Moreover, the study will have a practical contribution to the field of education management by developing effective classroom intervention using shared control and choice of pupils' decision-making and problem-solving. In this regard, the following recommendations are made:

- Ministry concerned with education has to integrate love and logic programme in the teacher education curriculum and in-service training to improve teacher training programmes.
- Ministry concerned with education should conduct regular workshops and training for in-service teachers to enable them to acquire skills related to love and logic to improve pupils' behaviours and performance.
- Teachers need to be empathetic towards pupils and create a positive relationship, which may reduce misbehaviour and thus increase learning ability and performance.
- The love and logic approach should be strengthened as an alternative approach to corporal punishment

Implications of Future Research

- It is vital for future research using multiple methods to focus on Love and Logic in secondary school classrooms.

Acknowledgments

The authors would like to thank all heads of school for permission and class teachers in the Dodoma city council for their willingness and for forfeiting their precious time to respond to the questions, which enabled us to draw upon analyses to prepare this paper.

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Assessment Of Perceived Readiness of Adopting Taneps: A Case of Dodoma City Council

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Abstract

Following the inefficiencies of traditional procurement system to Public Institutions in Tanzania, the government had to implement TANEPS with the objective of improving the nation's public procurement procedures more functional. But it was observed that, Dodoma City Council is using TANEPS as a solution to address the non-compliance issues, although it is not effective in use; therefore, this study explores challenges facing Dodoma City Council in adopting TANEPS for institutional procurement performance. Specifically, the study access perceived readiness of adopting TANEPS for institutional performance. A qualitative research design was employed whereby interview and documentary review were used as the data collection methods so as to get in-depth information on the perceived readiness of adopting the system. Content analysis was used to analyze data so as to quantify and analyze the presence, meanings and relationships of words, themes or concepts. The study revealed that, TANEPS was officially adopted in 2020 where it was partially implemented and it is not easy in use although, the system is supported by top management and there is adequate Institutions' information system infrastructure. Also, the study revealed that, TANEPS improve better service delivery in procurement procedures, TANEPS's system updating and software management is not stable for better use, although the government motivates the use of TANEPS through trainings. It is recommended that, much effort is still needed by Dodoma City Council and PPRA in order to strength the effective use of TANEPS and the regulatory and governing board should provide a supportive environment to system updating and software management.

Key words: TANEPS, Perceived

Introduction

One of the steps to integrate the cutting-edge digital technology that is gaining popularity around the world is the introduction of the e-procurement system, E-procurement systems were not recognized as permitted methods of procurement by Public Entities under the previous Tanzania Public Procurement Act (PPA), which was passed in 2004.

In 2018 toward adoption of e – procurement in Tanzania, the government notified the General Public that, pursuant to Regulation 342 of GN 446 of Public Procurement Act, an electronic public procurement system named Tanzania National e- Procurement System Tanzania National e-Procurement System (TANePS) has been introduced and is operational. Then government started to adopt the system by making pilot, where few Procuring Entities (PE's) were selected and being successful on using e procurement system, thereafter in 2020, TANePS officially launched to all Public Procurement Entities so as to provide efficiency and other improvements in the country's public procurement processes in order to fast service, reduced costs and minimize corrupt practices (PPRA, 2020).

TANePS as a public electronic system, designed to facilitate the country's public procurement and support various public procurement procedures including user registration, tender notification, tender preparation and submission, online tender evaluation, contract awarding, creation and management of catalogue, creation and management of framework agreements and auctions and payments. The government on achieving the benefits of electronic procurement system decide that, adoption of TANePS is mandatorily applicable to all the public procuring entities in Tanzania as recognized in the Public Procurement Act including; Ministries, Independent Departments, Agencies, Authorities, Parastatal organizations, Regional Administrative Secretariats, Local Government Authorities as well as potential suppliers, contractors and service providers who choose to make business with the Government in order to improve efficiency on Public Procurement practices.

It was noted that TANePS as an alternative of solving the non-compliance problem was not effectively used (CAG, 2020). Further review noted that, many (54%) PEs did not respond to usage of TANePS It implies that, only 54% (290 out 543) of PEs use TANePS during the

procurement planning phase, which means that all procurement proceedings except uploading of procurement plan are done out the system. However, when it comes to procurement awards, only 11% (32 out of 290) of PEs who submitted procurement plans to TANEPS used it, which means that not all PE's which are using the system in procurement proceedings also award the tender on the system because most of them use manual procedure on awarding phase. More analysis revealed that, only 0.8% equivalent to (130 out 16,037) contracts were awarded through TANEPS This implies that, even those 11% of PEs that use TANEPS still awarded some contracts offline.

According to David (1989) found that adoption of new technology relies on behavioral intention as such people will tend to adopt new technology at varied pace. The Behavioral Intention (BI) is influenced by the attitude (A) which is the general impression of the technology. Also when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably: Perceived Usefulness (PU) which encompasses the degree to which a person believes that using a particular system would enhance his or her job performance. It means whether or not someone perceives that technology to be useful for what they want to do. Perceived Ease-of-Use (PEOU) involves perception of intended users on what is perceived with regard to how technology is easy to use. If the technology is easy to use, then the barriers conquered. If it seems not easy to use and the interface is complicated, then no one has a positive attitude towards it. Thus, measures are required to be taken on improving the emotional and individual perception on TANEPS implementations so as to increase public procurement efficiency and effectiveness in the country economy.

Following the procurement inefficiency in traditional procurement system necessitated the government to impose TANEPS with the intention of enhancing efficiency in the country's public procurement processes (PPRA, 2021). The imposition of this system was crucial as efficiency is vital aspect of economy of the state as it is linearly correlated to the limited resources usage. Basically, TANEPS facilitates the country's public procurement and supports various public procurement procedures including user registration, tender notification, tender preparation and submission, online tender evaluation; contract awarding, creation and management of catalogue, creation and management of framework agreements and auctions and payments.

Despite its economic vitality to the state, 46% of the PE's did not adopt TANePS and only 11% of the tenders processed through TANePS award contracts online and only 0.8% of all public contracts awarded through TANePS (CAG, 2020). Furthermore, two features in TANePS named e-catalogue and e-contract management are altogether unused by PE's despite their economic role (CAG, 2020)

TANePS contradicts with some of the Sections of Public Procurement Act and Regulation such as; Section 68(2) of PPA requires the approved tender notice to be advertised in tender portal, journal and newspapers of wide circulations by Procuring entities while TANePS requires advertisement to be made online; Section 69(5) of PPA requires fees payable for purchase of tender document to be set by Procuring Entities, Under TANePS, Public Procurement Regulatory Authority sets and charges fees not Procuring Entities; Section 73 of PPA requires the secretary of the tender board to receive tender using procedure set out in Public Procurement Act.

This requirement is not applicable; and Regulation 166 of PPR requires micro procurement to be conducted by Procuring Entities that purchase direct from established supermarket or shops or drug stores if the value of that procurement does not exceed the limit set up while Under TANePS, Procuring Entities are required to choose from the list of registered suppliers. Therefore, regarding to all these contradictions between TANePS and Public Procurement Act and Regulations, still there are contradictions in the effective use of TANePS and lack of synchronization of these aspects might have attribute to the confusion and late adoption of TANePS

Also Dodoma City Council adopted TANePS by uploading annual procurements plans, inviting and awarding tenders and there is no evidence of using e-catalogue and e-contract (TANePS, 2022), therefore there is possibility for the system being ineffective due to facts that, not all tenders appeared on annual procurement plan being invited and awarded in TANePS

With this view, intended government objectives cannot be acquired with certain due to sluggish adoption of TANePS unless a thoughtful and purposive intervention are made to rescue the current situation, then perilous nation economic consequences were obvious. But as of now, it is difficult to point challenges as there is a limitation of literature review on the topic at

stake. Therefore, this study was further assess the perceived readiness of adopting TANEPS by PE's in Tanzania specifically Dodoma City Council.

Method

The Researcher collects data in Dodoma City Council; the area was being selected because it is located in town, where many public activities of Public Entities are located and where internet and digital infrastructures are available compare to other Districts Councils in Dodoma Region; the study collected data from at least 32 key informants basing on the facts that, the study requires comprehensive view and the researcher need the more opinions and experience from so as to get detailed information regarding the perceived readiness of adopting TANePS in Dodoma City Council; The key informants for this study included Procurement Management Unit Staffs, IT Officers, Auditors, Legal Officer, Engineers and Tender Board Members. In the study, a qualitative approach was used so as to acquire in-depth information form of views, opinions, and people's experiences.

Non-probability sampling in which snowball sampling technique were employed; People tend to be chosen deliberately because they have some special contribution to make, because they have some unique insight or because of the position they hold. It is worth emphasizing, though, that there is no hard and fast rule on this. It depends on whether the overall aim of the research is to produce results which are generalizable or the aim is to delve in depth into a particular situation with a view to exploring the specifics (Denscombe, 2010).

In this study, the researcher collects data by the using interviews and documentary review method. The Researcher used interview, so as to collect information on simple and uncontroversial facts by gaining insights into things such as people's opinions, feelings, emotions and experiences which enhanced to explore the Challenges of adopting TANePS in Dodoma City Council.

Semi structured interview was used to get information from interviews participants. Where the Researcher was not strictly follow a formalized list of questions. Instead, more open ended questions were asked by allowing a discussion with the interviewee rather than a straightforward question and answer format. Basing on snowball sampling technique, the participants recruited

other participants in assessing the perceived readiness of adopting TANEPS in Dodoma City Council. Once a Researcher had the ball rolling, it picked up more “snow” along the way and became larger and larger.

It's important to note that documents related to a particular project, topic or product from a variety of sources can be a very useful additional data collection (Chakrabarti, 2009). Documentary review involves the study of written communications that are found in the field setting. The documents, both historical and contemporary are rich source of data for social research (Gall, Borg, & Gall, 2014). This study reviewed the current data from Tanzania Procurement Journal of 2020-2022, Public Procurement Act of 2011 and its regulations of 2013 and PPRA and CAG auditing reports for the financial years 2018/2019 up to 2021/2022 to assess perceived public institutions' readiness of adopting TANEPS in Dodoma City Council.

The study use NVivo software 12 pro to perform qualitative findings through content or thematic analysis. The software was used to analyze data obtained from interviews text and audio so as to quantify and analyze the presence, meanings and relationships of words, themes or concepts.

Also, the study used content analysis method to analyze documentary data by studying existing information from Tanzania Procurement Journal of 2020 -2022, Public Procurement Act of 2011 and its regulations of 2013 and PPRA and CAG auditing reports for the financial years 2018/2019 up to 2021/2022 about adoption of TANEPS in public institutions especially in Dodoma City Council. The researcher considered the quality of documents while using it as evidence by cross verify documents against other similar documents before making a conclusion.

Results and Discussion

Easy of TANEPS in handling procurement processes in Dodoma City Council

When the respondents were asked on how easy is TANEPS in handling procurement processes in the study area, the findings revealed that, not all procurement processes can be completed through TANEPS, there are some procurement processes that cannot be easily handled by the system, due to some factors like urgency of procurements requirement, time factor and nature of items. The study revealed that, the system does not simplify the work at all because still other procurement procedures such as initiation of procurements and Tender Board approvals are done

out of the system and thereafter, the approvals submitted to the system for further processes as illustrated by an interview below:

“..... TANEPS does not finish the traditional/ manual procurement at all because not all procurements procedures are done by the system, example we are preparing contracts and initiating procurement procedures manually. Sometime is difficult to use TANEPS, example we get urgent requests which their implementations are also urgent, so we need to work with Bidders who are assuring with their performance...” (Interview No. 17).

These results imply that, TANEPS was adopted for procurement function but still it is not satisfy fully the requirement and needs of procurement management function in public and private sectors, thus most of key players in procurement were applying less effort in adoption of the system because still most of the procurement process can be handled manually.

Also the result from Documentary review shows that,

“...Dodoma city invites some tenders by using traditional procedures. PPRA required additional efforts in providing training to chief executive officers of public entities and tenderers saying there are still areas which pose challenges to even willing users of TANEPS and this state of affairs leads to less competition in procurement....” (Tanzania Procurement Journal, ISSN: 1821-6021 VOL.IX – NO.1, Issued Tuesday 22 March, 2022).

This finding implies that, still there are some institution, Dodoma City Council in particular that are using manual methods in procurement processes that need closely supervision and periodic training towards the positive significance of using the system.

The study concurs with that of Sharabati *et al* (2015) revealed that processing, content and user ability significantly affect end-user satisfaction, while the higher levels of end-user satisfaction led to the improved individual performance.

Therefore, the user of TANEPS still are not recognize fully the potentiality in of using the system in their daily routine in handling procurement function in Dodoma City Council since most of

the precedes can be handled manual. Hence much effort is still needed in order to strength the effective use of TANePS in order to exceed the service provided by the traditional method.

Benefits of TANePS in procurement processes in Dodoma City Council

The study revealed that, TANePS has increased transparency and competitions in the tendering processes hence lower complains, corruption and costs of goods and services as illustrated by an interview below:

“....TANePS has increased the supplier base, now we have interacted with many suppliers and we can get required goods and service with affordable price. The use of TANePS is through addressing the issues which were not solved by the traditional method of public procurement. Those issues are; corruption, inefficiency of public tenders and incapability of procurement staffs to acquire clients and solving some complex procurement issues... ” (Interview No. 16).

These results imply that apart from the challenges in adopting TANePS in public institutions, still the system has its enjoying benefits to the procurement function and government prospective and thus are highly needed for the betterment of the national.

These results are in harmony with those of Karthik & Kumar (2013) who revealed various types of benefits such as financial benefits, technical benefits, relative performance of procurement system, perceived manufacturer and supplier benefits. Additionally, Carabello (2001) reported that, e-procurement of medical and office supplies may provide value by managing expenses, introducing administrative efficiencies and reducing costs.

For that reason, TANePS is adopted as tools for social economic and political objectives including better service delivery to the citizen to whom the government is accountable, encouraging of private sectors engagement, green revolution and the need for global trade agreement.

Support of top management in TANePS adoption at Dodoma City Council

The study revealed that, PPRA as regulatory authority to all procurements in public institutions, insists the adoption of TANePS and it is mandatory to adopt it. Therefore, top management in

Dodoma city council adopt the system as a mandatory force from the law governing board illustrated by an interview below:

“.....How our management teams refuse to adopt TANEPS while it is mandatory and ministry of finance has been insisting it? So, our management should accept it whether they like it or not. As an institution the adoption of TANEPS is facilitated through allowing the provision of training to our staffs, set aside some fund for more facilities like computers and internet installation together with encouraging procurement personnel to quickly adopt the system more than relying on the traditional method with regards to its organization benefit. This is still in the process because some of our staffs accessed the training while others are waiting for the second phase....” (Interview No. 22).

These results imply that PPRA has given the mandatory power to enforce Procuring entities (PE's) all matters pertaining to procurement function on behalf of the government for the better transition of government economy via the contribution of Public procurement hence adoption of TANEPS in public institutions is necessary by law, rules and regulations which govern the countries procurement.

On the other hand, the Documentary review notifies that,

“.... Dodoma City Council has adopted TANEPS though; the institution does not support it fully. Now Government systems ensure that all public entities are linked to GePG and so this, in turn, compels availability and deployment of TANEPS in all public entities in the country, including remote district councils....” (Tanzania Procurement Journal, ISSN:1821-6021 VOL.IX – NO.1, Issued Tuesday 22 March, 2022).

The findings imply that it's the duty of top management to all procuring entity to support the adoption of TANEPS by applied different approaches including set aside fund to support the adoption environment of the system.

These results are in harmony with those of Alphonse (2020) who revealed that, top management involvement had great contribution to the effective implementation of TANEPS. Therefore, basing on these findings, the study concludes that; in public institutions particularly Dodoma city there is top management support on the adoption of TANEPS and thus most of the public institutions will be able to handle the adoption process of TANEPS.

The current status of information system infrastructures for implementing TANEPS in Dodoma City Council

The study revealed that, Dodoma city council have adequate information system infrastructures for implementing TANEPS, the infrastructures include internet, computers and electricity as illustrated by an interview below:

“....our institution has adequate information system infrastructures to support the use TANEPS together with other systems such as PMIS and GAMIS, so far we thank our management for their support. The institution has different information system infrastructures which enable our department to interact, performing our daily duties these in one way or another it simplify the adoption of TANEPS...” (Interview No. 22).

These results imply that, currently at least there is some of infrastructure that support the adoption of TANEPS thus employees have adequate infrastructures despite of some challenges that are tolerable.

These findings were supported by Technological Acceptance Theory (TAM) who informs that the TAM is an information technology framework for understanding users' adoption and use of emerging technologies particularly in the workplace environment and has been tested in older populations. The TAM also suggests that perceptions of usefulness and ease of use are mediated by external variables including individual differences, system characteristics, social influences, and facilitating conditions. Therefore, availability of information systems infrastructures is very crucial in the adoption of new technology (Tanzania National Electronic Procurement System) as suggest by TAM.

TANePS management in terms of system updating and software management for better use

The study notes that, TANePS is stable but sometime the system fails and interrupts the ongoing procurement processes, and actually the governing authority provide cooperation whenever there is system failure, manages the system for better use as illustrated by an interview below:

“....In each and every reforms there is some challenges and draws back, sometimes there is conditions which led to the system failure which in turn might affect the performance of procurement function and on the other hand consuming time due to waiting for the system to respond for example we have been experiencing the failure of the system while our tenders are in the process; but we thank PPRA for their guidance on how to proceed after the system failure despite of slow response of the governing board....” (Interview No. 19).

These results imply that procuring entities is unable to manage the system and software update as a technical challenge whenever the system fail, PPRA as a governing and monitoring board had an access to solve the challenges also the respond was being regarded as a slow response since procurement process need to manage time as a key objective in improving efficient.

On the other hand, the Documentary review notifies that,

“.... My assessment of cross-cutting application systems revealed that Tanzania Electronic Procurement System (TANePS) was not integrated with accounting system “Government electronic payment system” (GePG) and planning and budgeting system....” Also, notifies that *“.... The identified weaknesses are attributed to inadequate enforcement to ensure that Government entities comply with the Ministry of Finance and Planning (MoFP) directives and failure to effectively consider key operation and security controls during the development of application systems and insufficient testing of the application systems...”* (Controller and Auditor General, XX & XXII GR/IS/2020/21)

Also this imply that, the procurement process involves more than one system such MUSE, TANEPS and Planning and Budgeting System, which may cause difficulties in internal control systems for system updating and software management for better use.

These results are in harmony with those of McCue & Roman (2012) who revealed that, digitalized public procurement has not yet led to significant transformative changes. Thus, procurement processes need to be finalized with a well acknowledgeable and digitalized system which affords the whole process of public procurement. Therefore, the use of TANEPS is acknowledgeable if and only if the system will deliver all the mistakes from the traditional methods. The study recommends that the regulatory and governing board should provide a supportive environment to allow ICT technical expert from procuring entities to access and resolve an issue whenever there is a system collapse or inconvenient interruption.

Government enforcement to motivate the use of TANEPS

The study revealed that, the trainings which are issuing by PPRA motivate the use of TANEPS as illustrated by an interview below:

“....The trainings provided by PPRA through different platforms or media such seminars/workshops and newspapers motivate the use of TANEPS, because will assure usefulness of TANEPS especially in reducing corruption and increasing the business competition. Also the government budget on the whole process of adopting TANEPS and making it current priority among all issues of public procurement beside that the government through the ministry of Finance and Planning applying his mandate to enforce public procuring entities and other stakeholders to use the system....”(Interview No. 8).

These results imply that, with availability of employees' training towards the adoption and use of TANEPS, establishment of supportive laws and regulations becoming a pushing factor for procuring entities to start using the system. Therefore, the effective training to employees (user's of system), law and regulation as a guideline factor facilitate the usefulness of the new technology since organization are guided by the rules.

Also Documentary review noted that,

“...government motivates the TANePS use through training. Training is part of the tools the Authority employs to bring about awareness of the public procurement law to officials involved in procurement processes and to the general public...”(Tanzania Procurement Journal, ISSN:1821-6021 VOL.IX – NO.1, Issued Tuesday 22 March, 2022).

This result implies that, the government involved in set aside fund for training that give new hope and confidence to the managing directors of procuring entities, public procurement staffs and the whole entity on adoption of TANePS as a new system.

These results are in harmony with those of Abagna & Akay (2015) who revealed that employee competency is one of the challenges of e-procurement adoption. Thus, Dodoma city procurement staffs are competency in using TANePS and thereby improve the effective adoption of the system in order to attain the value for money in public procurement function. On the other side, as it was reported by Matunga (2013) that, one of constrain of e-procurement is the lack of training of employees on how to use the system. Therefore, united republic of Tanzania under the ministry of plan and finance play a regulatory and institutional role to insure that his power and influence towards adoption of new system become effective for management and individual employees in public institutions under the support of training on the use of TANePS The government are highly needed to add more effort on advancing facility and capacity building for public entities in a sustainable base.

Conclusion and Recommendation, Implication and the Area for Further Research

Conclusion

The study revealed that, in Dodoma City Council; TANePS is partially implemented because some tender processed out of the system, TANePS improve better service delivery in procurement procedures, Dodoma City Council have adequate information systems infrastructures and their Top management supports on TANePS adoption, TANePS's system updating and software management is not stable for better use and the government under the Ministry of Plan and Finance play a regulatory and institutional role to insure that his power and influence towards adoption of new system become effective for management and individual employees in public institutions.

Recommendations

It is recommended that, much effort is still needed to Dodoma City Council and PPRA in order to strength the effective use of TANEPS so as to improve procurement practices and enjoying the benefits of e procurement system. Also, the study recommends that; the regulatory and governing board should provide a supportive environment to allow ICT technical expert from procuring entities to access and resolve issues whenever there is a system collapse or inconvenient interruption.

Implication of the Study

The Researcher had only 32 key informants, where depth interview was required for more opinions and experience of the study, so as to get detailed information. And some interviewees refused to be recorded which forced the Researcher to write by taking note the interviews.

Area for Further Research

A study to be conducted on assessment for TANEPS's procedures in procurement performance. This will enable to assess the factor which cause ineffective of TANEPS in procurement procedures.

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**Examining the influence of staff competence on implementation performance
of Tanzania National Electronic Procurement System; Evidence from
Ministry of Culture, Arts and Sport, Tanzania**

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Abstract

This study assessed the factors affecting the implementation performance of TANEPS, specifically, study intended to examine the influence of staff on implementation performance of TANEPS. The study was conducted at Ministry of Culture Arts and Sports, Tanzania. This study employed descriptive research design in which 142 respondents were sampled and involved in the study. Purposive sampling technique was used to draw sample. Data were collected through questionnaires and analyzed by using descriptive, correlation and multiple regression analysis with the support of SPSS Software version 22. Findings showed that, staff competency play an important roles in improving the applicability of TANEPS and have positive and strong relationship with the implementation performance of TANEPS with P-value = 0.000(P<0.005). The study concluded that, staff competence and other resources had great contribution to the performance of TANEPS. The study recommended that the organizations should create employee competent staff, ensure that management provides support toward implementation of TANEPS by employing staff with competencies, experiences and knowledgeable workforces as well as ensuring availability of financial resources with P-value = 0.000(P < 0.005).The study suggests similar study to be conducted in other public entities to examine other determinants other factors affecting implementation performance of TANEPS in Tanzania.

Key words; Examining, Influence, Staff Competence, Implementation, TANEPS

Introduction

Over the years, the use of information and communication technologies (ICT) in the implementation of contract activities such as TANePS has produced a number of advantages in contracting. Because it promotes transparency, accountability, efficiency, corruption and the rule of law in public procurement, where taxpayers' money is spent. Several procurement reforms in public procurement processes and governmental structures have been implemented worldwide to find a better way to manage the public procurement process due to the high volume of spending related to procurement where public and private sector stakeholders NGOs are interested in working electronically with the government to do business to improve services to the general public (Yano & Nondi, 2018).

In African perspective, the use of electronic procurement has given more priority as it saves time, cost and improve quality hence achieving value for money in public procurement for example in Libya, Almadani (2016) noted that influence the implementation of electronic procurement systems depends much on various factors such as management support, the use of e-tendering practice and the use of interpreted system within the organization leads to higher procurement performance. The study also recognized that when there is efficient and effective use of information systems including integrated system, e-informing and e-tendering systems made the organization to increase the performance of procurement functions.

In Tanzania, Watuleke (2017) argued that in order to ensure organization performance it is necessary to adopt e-procurement practices. Kiage (2013) proposed that for effective and efficiency procurement management and organization performance, it is necessary to institute e-procurement practices such as electronic internal controls activities and systems as well as e-monitoring of procurement functions. Ndolo and Njagi (2014) suggested that in most procurement staff on their study indicated that there was no training on procurement e-procurement practices and most cases relied on seminars which actually affects organization performance.

Despite of the efforts made by the Government through provision of training to various procurement stakeholders such as users, tender board members, PMU officers, accounting officers and suppliers in order to ensure effective implementation of TANePS, the

implementation performance of TANePS is not satisfactorily CAG, (2019/2020). PPRA audit report of 2020/2021 noted that there are various organizations which are still acquiring their requirements manually contrary to the Government directives which drive this study to investigate the determinants for implementation performance of TANePS in Tanzania.

As the means of determining implementation performance of TANePS in this study, therefore the study is motivated to gain understanding on the factors affecting implementation performance of TANePS in Tanzania specifically on the effect of staff competency, technological infrastructure and financial resources towards implementation performance of TANePS at Ministry of Culture, Arts and Sports (MoCAS).

Statement of the Problem

Procurement activities in Tanzania is the core function of government organizations in stimulating social, economic, political development as well as a tool for achieving environmental sustainability (Moranda, 2015). Due to its potentiality in economic and social development organizations have invested more resources for the use of TANePS so that to increase the performance of procurement in terms of cost, time, quality and improvements of government services (Lema and Mrope, 2018).

CAG report of 2020/2021 indicated that 184 organizations does not comply with the prevailing procurement laws and regulations and the current order for the effective use of e-procurement (TANePS) which affects performance of procurement in terms of time, cost and quality of customer services. It has been demonstrated that there an increasing efforts on performance of procurement functions that call for implementatinos of e-procurement (Damas, 2015 and Selemani, 2014).

In financial year 2020/21, PPRA conducted 48 training sessions on TANePS which were attended by 1320 public servants and 1715 economic operators as compared to 2707 public servants and 531 economic operators trained in the preceding year. A total of 718 entities got registered in TANePS, out of which 588 submitted the APPs through the system. However only APP from 574 (447 PEs and 127 delegated) which is 80% of the entities registered were approved and published through the system where by APP from 14 entities where not published

because they had anomalies (PPRA Annual performance evaluation Report for the financial year 2020-2021).

The government has implemented several reforms in the legal framework of public procurement and amended the Public Procurement Act of 2011 and the Public Procurement Regulation of 2013 with the aim of supporting e-procurement, which is more efficient and transparent in its performance. Despite changes in the legal framework for public procurement (Schooner et al., 2016) to focus on the uptake of e-procurement, the benefits that could be achieved from a successful implementation of e-procurement in the public sector (Bashekaal ., 2012) and the positive contribution to the performance development of the public procurement process (Mujtaba, 2014), some stakeholders (procurement officials and suppliers) have advocated the adoption of e-procurement due to different perceptions.

Recalling from the studies by Mahdillou and Akbary (2014), Malekia (2009), Ndibalema (2014), Said (2016) and Suleimani (2015), it is demonstrated that electronic procurement could be impacted by adequate resources within the organization, and that should be the focus to implementing it successfully.

It is in this sense that the researcher was motivated to gather data that helps to determine the determinants for implementation performance of TANePS in Tanzania public institutions by concentrating on the influence of staff competence, technological infrastructure and financial resources at Ministry of Culture, Arts and Sports (MoCAS).

Study Objectives

The general objective of the study was to assess the factors affecting implementation performance of TANePS at Ministry of Culture, Arts and Sports. Specifically, the study aimed at examining the influence of staff competence on implementation performance of TANePS at Ministry of Culture, Arts and Sports (MoCAS).

Literature Review

Theoretical Framework

This study was based on a total of two theories. In these theories, the connotations were used to allow the researcher to get conceptual definitions and understanding about the implementation of electronic contract systems and to develop the conceptual framework of this study. Theories used in this study are Technology Acceptance and Resource-based theories. The theories used in this study are described in the following subsections.

Resource Based Theory

Resource-based theory is based on the assumption that the performance of any organization depends critically on resource availability (Grant, 1991). According to Robinsons (2008), resourced based theory concentrates on the resources and capabilities derived, owned and controlled by the organization, which can increase the organisation's competitive-padvantages in terms of cost, time, and quality.

Implementation of e-procurement depends on the resources available within the organization and therefore, the resource is the basic requirement for effective implementation of Tanzania National electronic procurement. Resource-based theory is the one of the most helpful theory used to guide and formulate framework in order to increase performance in the organization (Mweru and Maina, 2015).

Organization needs to have various resources like human resources, financial resources, the capital resources, and intangible resources for the effective implementation of its tactics, strategies and plans. In public procurement, all PEs are requirement plan its procurement but regardless how well procurement plan is, of there is inadequate resources the implementation of the said plan will be questionable (URT, 2011).

Hall (1993) noted that resources are the primary equipment for organization performance. Organizational resources such as human resources, capital and financial resources have great impact on performance of the organization because organization have various strategies and plans that need to be implemented under respective period which require various resources.

Ongola (2018) recommended that the firm's resources such as legal resources, technological-resources, financial - resources, physical resources, and human resources like competency of employees, competency of managers, and the interpersonal skills increase implementation performance of TANePS in the organization. Therefore, the organization needs to have enough resources in order to increase the implementation performance of TANePS within the organization.

This resource collaborates with independent in that the implementation of Tanzania electronic procurement (TANePS) depends on the availability of various resources. Regardless of how well plans and strategies the Government through its respective authority has, without resources such as ICT equipment, financial resources, capital resources, and capable human resources. Also the said resources need to be well controlled and optimum utilized since resource always is scarcity and need to wise and well utilized. Therefore, to ensure effective implementation of TANePS, public procuring entities such as Ministry of Culture, Arts and Sports (MoCAS) need to ensure enough availability of resources.

Empirical Reviews

There were various literatures have been carried out concerning electronic Procurement effectiveness and implementation in Tanzania perspectives compared to the western countries, some of the studies were carried out by Nziku (2019); Malekia (2009); Makoba *et al* (2017); Rasheli (2016) conducted studies on the factors affecting adoption of electronic procurement in private sectors, as Ndibalema (2014) carried out study on investigation of end-users acceptance of enterprise-resource planning systems at the post- implementation phase in Tanzania.

Suleiman (2015) on his study indicated the presence of a strong relationship between ICT and procurement performance by saying that as the organizations he researched had ICT infrastructures available, the performance of the procurement section would be better. He argued that for the aim of ensuring efficiency and effectiveness of procurement functions the use of electronic procurement systems like TANePS is mandatory.

Makoba *et al.* (2017) found that the most critical factors most important during implementation are senior management support, technological infrastructure, effective communication, process

redesign, clear goals, project management, change management, teamwork and composition, user training and user participation and involvement. The study was also able to uncover the implementation approach of SBL in the implementation of the SAP system. SAP's implementation went through several phases before reaching the go-live, preparation phase and phase five of go-live and support.

Said (2016) in his study based on assessing the challenges of implementing and coordinating e-procurement in the public sector in the United Republic of Tanzania. The results of the study showed that providers are perceived positively with regard to the use of information technologies and participation in procurement opportunities. In addition, the study recognized several limitations associated with the use of electronic recruitment systems, such as: Lack of staff competence, low technological level and lack of knowledge of other stakeholders and key players in recruitment.

Further More, 366 entities or 64 percent of those who had their APP published went on to carry out procurement through TANePS whereas on other hand, 208 entities (81PEs and 127 delegated entities) or 36 percent did not carry out procurement through the system. It was also noted that only 194 entities which is 53 percent of 366 entities which conducted their procurement in

Research Methodology

Study Area

The study was undertaken in Ministry of Culture, Arts and Sports (MoCAS). This was because TANePS is properly implemented where some procurement takes long time rather than expected and some procurement is still executed manually despite of the Government directive that require each procuring entities to acquire goods, works and services electronically. Since Ministry of Culture, Arts and Sports (MoCAS) spend huge amount of financial resources and other resources on the determination of TANePS implementation performance is importance.

Research Design, Sample Size and Sampling Procedures

A crossection design was employed in this study as the researcher gathered information on the subject matter at one point in time.

The target population of the study was 220 employees from Ministry of Culture, Arts and Sports (MoCAS) from Information and communication Unit (ICT), Finance Unit, Legal Unit, Internal audit Unit, Procurement Unit, Human resources department, Department of Arts and Sports Development that normally play role on implementation performance of TANEPS at Ministry of Culture, Arts and Sports (MoCAS)

that normally play role on implementation performance of TANEPS at Ministry of Culture, Arts and Sports (MoCAS).

The major techniques in obtaining sample size was non-probability sampling procedures specifically purposive sampling, in which sample size of 142 obtained by using Yamane formula of sample size calculation from a population of 220 . Purposive sampling procedure was used for selecting employees who are direct participating in executing implementing TANEPS as well as experience on executing activities relating with e-procurement practices.

Data Collection Method and Tools

Questionnaire and documentary review were used to obtain primary data and secondary data respectively. The primary data was collected directly from the Ministry of Culture, Arts and Sports (MoCAS) personnel and management who are the supporters for implementation performance of TANEPS, whereas secondary data was obtained from various reviewed documents and reports. In this study questionnaire was a major means of collecting data from respondents. Self-administered questionnaire took place to ask respondents to complete themselves.

The researcher used questionnaire due to low cost for large and widely population. Self-administered questionnaire took place to ask close-ended questions to the respondents to complete for themselves. Close-ended questionnaires was administered to the employees from the selected departments including Information and communication Unit (ICT), Finance department, Legal Unit, Internal audit, Procurement Unit, Human resources department, Department of Arts and Sports Development that normally play role on implementation performance of TANEPS at Ministry of Culture, Arts and Sports (MoCAS)

Results And Discussions of Findings

Knowledge on TANEPS applications

Knowledge on TANEPS applications is an important aspect in increasing implementation performance of TANEPS. The aim of this sub variable was to assess if staff are knowledgeable on TANEPS application in Tanzania Public sector or not. The findings are presented in Table 1.

Table 1: Knowledge

Levels	Frequency	Percent
Strongly Disagree	5	3.5
Disagree	28	19.7
Neutral	22	15.5
Agree	79	55.6
Strongly Agree	8	5.6
Total	142	100.0

Source: Field Data (2022)

Findings from Table 1 indicates that 79(55.6%) of the total respondents agreed on statement that knowledge to procurement staff increase implementation performance of TANEPS in public sector, 28(19.7%) of the total respondents disagreed that that knowledge to procurement staff increase implementation performance of TANEPS in public sector and 22(15.5%) of the total respondents were nutro that knowledge to procurement staff increase implementation performance of TANEPS in public sector. The findigs also indicated that 8(5.6%) of the total respondents were strong agree in the statement that that knowledge to procurement staff increase implementation performance of TANEPS in public sector while 5(3.5%) of the total respondents

strongly disagreed that that training to procurement staff increase implementation performance of TANEPS in public sector.

This implies that majority of respondents of about 87 respondents equals to 61.2% conured that knowledge of staff with regard to TANEPS applicability is an important consideration within the organization and therefore in order to increase implementation performance of TANEPS the management of the organization and the Governmenet need to ensure that procurement and non procurement staff that are normally involved in procurement functions are given relevant training for the sake of improving performance implementation of TANEPS in Tanzania.

This result also was supported by Suleiman (2015) who researched on the adoption of electronic procurement systems in Tanzania and suggested that TANEPS applicability required trained staff who utilize the given knowledge of procurement staff improve the usability of TANEPS in Tanzania. This provides lesson in the sense that regardless on how well the system is good and planned without proper knowledge of procurement stakeholders concerning application of the same, the implementation of TANEPS is questionable thus knowledge to procurement staff and other stakeholders involved in implementation of TANEPS is an important aspect.

Expertise on TANEPS usability

In this part, researcher was interested to understand if the expertise on TANEPS by procurement staff in executing procurement functions increases the implementation performance of TANEPS in Tanzania or not. Table 2 shows the results.

Table 2: Experience on TANEPS applications

Levels	Frequency	Percent
Strongly Disagree	20	14.1
Disagree	40	28.2
Neutral	16	11.3
Agree	53	37.3

Strongly Agree	13	9.2
Total	142	100.0

Source: Field Data (2022)

Results indicated in Table 2 showed that 53(37.3%) of the total respondents agreed that implementation of TANePS in public organization is executed by expertise personnel which in turn increase performance implementation of TANePS in TANePS within the organization and 40(28.2%) of the total respondents disagreed that TANePS depends on knowledge possessed by employees within the organization. The findings also indicated that 20(14.1%) of the total respondents strongly disagreed that implementation performance of TANePS within public entities is not implemented by expertise personnel.

Furthermore, the results showed that 16 respondents equal to 11.3% were neutral on the statement that implementation performance of TANePS within public entities is determine by expertise possessed by employees within the organization while 13 respondents equal to 9.2% respondents strongly agreed that the implementation performance of TANePS in public procuring entities is executed by expertise personnel which increases the implementation of TANePS and hence increases organization performance in terms of time saving, cost reduction, increased competition and improved quality of the services offered to the public. These results means that staff competency has a major contribution to the effective implementation of electronic procurement system in Tanzania. The findings of this study is related with Ongol (2017) who recognized that staff competency have positive influence on the implementation of electronic procurement systems within the company and therefore there is need to ensure that staff have enough experience to use the system.

Ethical compliance

In this sub variable researcher wanted to obtain the overall perception of respondents concerning ethical compliance on implementation performance of Tanzania National electronic procurement systems. Respondents sought to determine whether ethical compliance influence implementation performance of this system or not. Table 3 indicateds these results.

Table 3: Ethical compliance

Levels	Frequency	Percent
Strongly Disagree	32	22.5
Disagree	48	33.8
Neutral	4	2.8
Agree	52	36.6
Strongly Agree	6	4.2
Total	142	100.0

Source: Field Data (2022)

The results from descriptive analysis revealed that 52(36.6%) of respondents strongly agreed that ethical compliance in implementation of TANePS increase effective implementation performance of TANePS, 48(33.8%) of respondents disagreed that ethical compliance increase effective implementation of TANePS, 32(22.5%) of respondents strongly disagreed, 6(4.2%) strongly agreed that ethical compliance increase effective implementation of TANePS in public sector while 4(2.8%) of the total respondents were neutral that practices of ethical compliance to procurement stakeholders implementing TANePS increases performance implementation of TANePS within the public procuring entities in Tanzania.

This results means that in order to increase the effective implementation of TANePS within the organization, stakeholders including the Government should ensure that staffs who are involved in procurement of goods, works, services, evaluations are competent enough and ethical about the application of TANePS. These results means that staff competency has a major contribution to the effective implementation of electronic procurement system in Tanzania. The findings of this study is related with Ongol (2017) who recognized that staff competency has positive influence on the implementation of electronic procurement systems within the company and therefore there is need to ensure that staff are competent enough to use the system.

Skills of staff in implementation of TANePS

In this sub variable, researcher wanted to determine whether skills to procurement staff in implementation of TANePS increase performance implementation of electronic procurement systems increases the effectiveness of procurement activities in Tanzania or not. See Table 4 for more informations.

Table 4: Skills of the staff in TANePS implementation

Levels	Frequency	Percent
Strongly Disagree	19	13.4
Disagree	33	23.2
Neutral	12	8.5
Agree	63	44.4
Strongly Agree	15	10.6
Total	142	100.0

Source: Field Data (2022)

Results indicated in Table 14 shows that 63 respondents equals to 44.4% agreed that skills of the staff in TANePS implementation increases performance implementation of TANePS in public procuring enties, 33 respondents equals to 23.2% of the total respondents disagreed that skills of the staff increases implementation performanc of TANePS within the organization. The findings also indicates that 19 respondents equals to 13.4% strongly disagreed that skills of the staff increase performance implementation of TANePS in public procuring enties in Tanzania. Also the findings showed that 15(10.6%) of the total respondednts strongly agreed that skills possessed by staff in public procuring entity increases the implementation performace of TANePS within the organization while 12(8.5%) of the total respondents stayed neutral that skills of the staff neither nor increases implementation performance of TANePS in public procuring enties in Tanzania.

electronic procurement systems, the organization need to ensure that staff has the required competency in undertaking procurement activities through the use of TANePS

Regression Analysis

Multiple regression analysis was performed to determine the relationship between the study variables. Multiple regression analysis is beneficial for this study because it allowed the investigator to confirm the existence of a significant relationship between the independent variables to be determined and the dependent variable made it possible to indicate the relative strength of the influence of several independent variables on a dependent variable. Several regressions were used to determine the relationship between the independent variable and the dependent variable.

Rencher, Alvin, Christensen and William (2012) recognized that using multiple regression analysis is simple and easy to interpret the finding and helps the study to become precious and draw viable conclusions. Kothari (2014) defined multiple regression analysis as the model that intends to explain relationship between one independent variables and dependent variable. This study used multiple regression analysis since it is simple to perform, easy to interpret the study findings and simple in drawing the study conclusions as well as recommendations based on the study objectives. Multiple regression analysis had three outputs such as model summary, analysis of variance and coefficient results.

The results of the multiple regressions on the coefficients showed that there was a strong and positively significant contribution between the independent variables and the dependent variables. According to Pallant (2005), when evaluating the independent variable, when the Sig. value (p-value) is less than 0.05, the variable makes a unique and significant contribution to predicting the dependent variable. If greater than .05, then you can conclude that the variable does not make a significant unambiguous contribution to predicting its dependent variable. In the Table above the $p\text{-value} = 0.000 < 0.05$. Then from the finding it is determined that staff competence, ICT infrastructures and financial resource had significant contribution to the implementation performance of Tanzania National electronic procurement systems in Tanzania. The results of coefficient of regressions were presented in Table.

Table 5: Coefficients of regressions on the factors affecting the Implementation performance of TANEPS

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	.060	.357			.169	.000
Staff Competence	.258	.062	.226		4.134	.000
ICT Infrastructure	.163	.063	.167		2.584	.001
Financial Resources	.564	.059	.616		9.519	.000

a. Dependent Variable: Implementation performance of TANEPS

From the regression equation developed, assuming all factors such as staff competence, top ICT infrastructures and financial resources, constant (at zero), the implementation performance of TANEPS at Ministry of Culture, Arts and Sports (MoCAS) would be 0.060.

The regression equation further shows that if all other variables are kept constant, a unit increase in staff competence on implementation of TANEPS lead to 0.226 increase in implementation performance of TANEPS which is statistically significant at P value = 0.000 ($P < 0.05$). Also assuming other factors remain unchanged, unit increases in ICT infrastructure lead to a 0.167 increase in implementation performance of TANEPS which is statistically significant at a p value = 0.01 ($P < 0.05$).

Furthermore, when other factors are kept unchanged, unit increase in the of financial resources lead to 0.616 increases in implementation performance of TANEPS at Ministry of Culture, Arts and Sports (MoCAS), this contribution was statistically significant at a p value of 0.000 which is less than 0.05.

Therefore all the independent variables contributed significantly to the implementation performance of Tanzania National Electronic Procurement Systems in Tanzania specifically at Ministry of Culture, Arts and Sports (MoCAS) head office Dodoma.

Hypothesis Testing

Following the analysis conducted, researcher aimed to test hypothesis. According to Pallant (2010) hypothesis is accepted if the significance level is less than significant value of 0.05. Unstandardized Beta coefficient was used to determine the direction of the relationship between independent and dependent variables. The study had four hypotheses as presented here below:-

H₁: *There is positive and significant relationship between staff competence and implementation performance of TANEPS*

The finding of the correlation analysis indicated that there is a positive correlation between staff competency and implementation performance of TANEPS where by $r=0.274$ and $p\text{-value}=0.001$ which means that a unity increase of the staff competency for implementation performance of TANEPS leads to an increase in implementation performance of TANEPS.

Results on multiple regression analysis, staff competence had a significant value of 0.05 with unstandardized coefficient of value of 0.226 which indicated that staff competence has positive significant effect to the implementation performance of TANEPS. Therefore the hypothesis was accepted

Conclusion And Policy Implication

Conclusion

Determining the influence of staff competence to the implementation performance of TANEPS was the first objective of this study where after critical literature review, the formation of its corresponding hypothesis (H1) in supporting of the relationship between staff competence and implementation performance of TANEPS was formed. Findings found significant positive relationship between staff competence and implementation performance of TANEPS at a significant value of 0.000 which is less than 0.05.

Area for Further Studies

The study focus was on the assessment of the factor affecting effective implementation of TANePS specifically at Ministry of Culture, Arts and Sports (MoCAS) only and therefore similar study should be conducted to the other public organizations not covered in this study. Further study concentrated on the four factors which was staff competence, ICT infrastructure and financial resources which contributed about 58.2% and therefore other study should be undertaken to determine other factors that influence the implementation performance of TANePS by the remaining % that 41.8%.

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Effects Of Negotiation Planning on Procurement Efficiency: A Case the Ministry of Finance and Planning

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Abstract

Planning for negotiation is an important aspect in public procurement as it leads to efficiency and accountability in government spendings towards service delivery. This work explored the effect of negotiation planning on procurement efficiency in the Ministry of Finance and Planning. The study used cross section research design whereby both quantitative and qualitative research approaches were adopted. The work involved a sample of 80 respondents. The findings revealed that, negotiation planning is positively related with procurement efficiency.

Key word; *Negotiation, planning, procurement, efficiency*

Introduction

Negotiation Planning is important in purchasing contract management because it leads to the procurement efficiency. Organizations can improve procurement efficiency through enhancing planning initiatives in obtaining requirement. In doing that, staffing of well-trained officials on difference negotiation tactics is among prerequisites for success. However, majority of strategies used in negotiation tend to base on intuition, emotion, and or reliance on past positive experience (Baker and McKenzie, 2017).

The environments surrounding procurement managers across industries and public services are quite important. For the understanding the existing challenges facing negotiation planning process, businesses need to take care of their costs of production while public services need to manage tight budgets. This is aggravated by difficult economic conditions such as the one that has been caused by COVID-19 pandemic (Agua, Correia & Frias, 2022).

In Tanzania, negotiation planning is an aspect that is not seriously taken by many organizations. The available evidence indicates that instead of negotiation planning, some organizations do conduct post qualification especially in huge projects to determine whether tenderers have the legal capacities and capabilities to carry out the intended contracts. Such tendencies of undermining the essence of negotiation planning is associated with inefficiencies that undermine welfare of the respective institutions.

On the practical side, the findings revealed by the conducted procurement audit exercises suggest that negotiation planning are not regarded as of higher importance. Among examples, is the reported audit finding which indicated that the Ministry of Finance and Planning is lacking enough human and financial resources for effective and efficient negotiation planning practices which resulted to the delay and ultimate termination of contracts worth Shs. 2.1 billion and Shs. 421 million respectively (PPRA Audit Report, 2019/20).

This study focuses on the public sector of Tanzania, primarily as a case study, to provide some insights of the effects of negotiation planning on procurement efficiency. The paper is divided into six sections, which sequentially start with an introduction, followed by sections presenting the literature review, methodology, analysis, discussion and conclusion.

Empirical Literature Review

Negotiation among other relevant tools in sourcing selection function that procurement employ in making an organization to actualize their goals to arrive at a most judgment on which suppliers are to be selected. Negotiation usually requires negotiation with the suppliers in order to arrive at a common understanding on essence of a purchasing price. In order to determine purchase price buyers and supplier usually discuss element such as cost of production and market conditions. Negotiation as a tool for effective material pricing can be deployed to determine the right price of goods and service to be procured. Mochoge, (2017); John and Rose, (2021); Andrea, (2019) in their study focused on effects of negotiation strategies on effective material pricing in retail outlets, effect of contract negotiation on performance of Non-Governmental Organizations and role of negotiation skills in purchasing contract management in the public sector respectively. None of them has tried to link negotiation planning with procurement efficiency. Proper planning before negotiation is very high fundamental and essential for any

successful negotiation as it helps to acquire information concerning the aspect of procurement such as delivery time, quality of suppliers, fair and reasonable price for the service required.

Negotiation skills are important part of doing business, in today's hyper-connected and increasingly competitive market, the ability to negotiate effectively is more highly valued. Strategic and technical skills is needed to identify, source and buy goods and services that requires professionals involved in negotiation to know how to build and manage long-term relationships and maximize value for their organization through effective negotiation. The study conducted by Andrea (2019) illustrated the role of negotiation skills in purchasing contract management in the public sector in Tanzania. The study found that, negotiations contribute significantly to business success. It has been observed that the most commonly used negotiation techniques are only distributive and integrative in nature. Moreover, Ayantoyinbo and Oguntola (2018) established that appropriate negotiation is a procurement technique which is strong and has an important outcome in procurement goals realization. The study further emphasized on the need for staff training, particularly in negotiations skills in order to achieve win-win negotiated agreements.

Negotiation as one of the most important aspect of procurement that has a positive and significant effect on the performance of the Organizations. Negotiation allows both parties to agree upon expected performance level through clear, well-laid-out service level agreements and key performance indicators. Negotiating terms and conditions helps mitigate future issues with project scope, timing, delivery and payment. This statement is supported by the study conducted by John and Rose (2021) which focused on effect of contract negotiation on performance of international Non-Governmental Organizations (INGOS) In Nairobi City County, Kenya. Also, the study conducted by Baker and McKenzie (2017) established that contract negotiation in public institution had a significant impact on an organization's performance. The study concluded that mandatory contract provisions must adhered in all government procurement contracts. Organizations are advised to ensure that negotiation forms a sustainable part of the procurement process with a measure of responsibility that ensures achievement of organization's goals of improved quality goods and service delivery.

Negotiation Theory

Several authors have provided their views on contribution of negotiation theory for effective procurement process. For instance, Lewicki et al. (2003) argue that integrative approaches in negotiation theory are critical for creating conditions of mutual gain, and emphasize the importance of information exchange between buyers and suppliers, Integrative strategies require participants to collaborate to create win-win solutions because integrative approaches emphasize problem solving, cooperation, joint decision making, and mutual gains. On other hand Wondwosen, (2006) state that, in practice, negotiation theory assists procurement experts in thinking analytically about negotiation processes during procurement planning and implementation The information they provide can help us shape how we negotiate and, as a result, influence procurement efficiency. The theory is also applicable because, in order to achieve procurement efficiency, it is critical to focus on interests, anticipate and address sources of bias, and finally reach agreement within and across parties.

Research Methodology

The study was conducted using a cross-sectional research design. On the other hand purposive sampling technique was used to select Heads of Departments since they have no equal chance to be selected, therefore the study relied on its own judgment of possession of managerial and specialized information on negotiation strategies and procurement efficiency by virtue of the position held. The distribution of the selected sample from Ministry's division selected is presented in Table 1. Under probability sampling procedure, the sample was selected from a population, based on the principle of randomization, that is, random selection or chance as shown hereunder: -

Table 27 : Proportional Sample Size Determination

Departments/unit	Population	Proportionate Sample	Sample size per Departments
Procurement	20	$20/111 \times 80$	14
Management Unit			

Departments/unit	Population	Proportionate Sample	Sample size per Departments
Legal Services Division	6	$6/111 \times 80$	4
HoDs	10	$10/111 \times 80$	7
ICT Unit & Financial Information Systems Division	30	$30/111 \times 80$	22
Policy Analysis, Government Budget & Planning Division	25	$25/111 \times 80$	19
Accounts and Finance	20	$20/111 \times 80$	14
Total	111		80

Source: Researcher, 2022

Data Analysis Technique

Through triangulation, this work employed both qualitative and quantitative means of analyzing data. Descriptive measures such as of central tendency, arithmetic mean, frequencies, percentages, and the standard deviation were employed. Likewise, inferential statistics used to draw conclusions. In the same way, correlation analysis was applied to test the significance of relationships between independent and dependent variables.

Results and Discussion

Impact of negotiation planning on procurement efficiency

Planning is one of the foremost vital angles of a transaction assembly (Atkin and Rinehart, 2016). Destitute arranging can result in permitting the other party to deliver less concession than you were initially considering, which may result in increment of company consumption. The more time you commit to planning and arranging for arrangement assembly, the way better is your last result, the impact of negotiation plan has been depicted under the discussion bellow;

Table 1: Impact of negotiation planning on procurement efficiency

Source: Researcher, 2022

Understanding negotiation context and Procurement efficient

Findings in Table 1 above revealed that 53.8% of the respondents were strongly agreed that understanding of the context has got impact on the procurement to be efficiency and effective. While 46.3% of the remaining Planning on procurement is very important hence Failure to plan properly often leads to unclear objectives for the negotiation, the use of inappropriate negotiating styles or tactics and a sense that a better result could have been achieved.

Kiswili et al., (2015) reported that negotiation always takes place within a context. There important issues to be considered in understanding the context of a negotiation include: the nature of the procurement you are making in terms of its level of risk, the level of expenditure and the complexity of the good or service that is being procured, nature of the supply market -

Statements	Strong agree	agree	Neutral	Disagree	Strong Disagree
Understanding the context	53.8%(43)	46.3%(37)	0(0)	0(0)	0(0)
Knowing what need to be achieved	28.8%(23)	71.3%(57)	0(0)	0(0)	0(0)
The negotiation team	40% (32)	60(48)	0(0)	0(0)	0(0)

fully competitive, dominated by a few larger suppliers, unsophisticated suppliers, maintain a long-term relationship with this supplier and community sensitivities (Mwitango, 2019).

Awareness of the need under negotiation and Procurement Performance

From the study findings revealed 71.3% and 28.8% of the respondents agreed and strongly agreed respectively. This means that knowing the needs to be achieved among negotiators has got impact of the procurement hence it reduces the expenditure. Prado argued that once the context for the procurement negotiation is understood, standard techniques can be applied to planning the negotiation. Knowing what to attain within the transaction is essential and this information is accommodating in choosing the foremost fitting approach to be utilized for the transaction. This study concurs with that of John and Rose (2021) who argued that determination and understanding of the need is the best way to win the negotiation ground. Therefore, it is necessary to understand the broad goals or desired outcomes of the procurement. When this higher level direction is clearly caught on, it is conceivable to choose on steady objective for the negotiation.

Arrangement negotiation team and Procurement efficiency

Furthermore, this study's findings show that 60% and 40% of respondents agreed and strongly agreed, respectively. The negotiation team wields considerable power in negotiations during procurement processes. Normally, a negotiation team must include a variety of professionals with varying skills and knowledge. According to the findings of this study, a strong team is required for effective and efficient procurement. According (Stelzer Cand, 2017; Kiswili et al., 2015) argued that a team of negotiators might be appropriate for large purchases. A leader must be chosen, and the roles of members must be defined and clarified. These negotiators must be properly trained and skilled. As a result, it is advised that negotiators spend time rehearsing and role-playing the likely options.

Inferential Statistics Results

Table 2: Correlation analysis of negotiation planning and procurement efficiency

		Negotiation planning	Procurement efficiency
Negotiation planning	Pearson Correlation	1	0.721*
	Sig. (2-tailed)		0.004
	N	80	80
Procurement efficiency	Pearson Correlation	0.721*	1
	Sig. (2-tailed)	0.004	
	N	80	80

*Correlation is significance at the 0.05 level of significance (2- tailed)

Source: Research Findings (2022)

The study also employed Pearson correlation coefficient (r) to establish the relationship between negotiation planning and procurement efficiency. The findings of the analysis are presented in Table 3. The findings revealed that there is strongly significant relationship between the negotiation planning and procurement efficiency (p -value < 0.05). This implies that any positive improvement of negotiation planning could increase procurement efficiency in the Ministry of Finance and Planning

Conclusions and Recommendation

The study found that negotiation planning had positive and significant relationship with procurement efficiency. The study concludes that, negotiation practices such as organization needs to set aims, accumulates facts and defines duties an important negotiation tactic in procurement efficiency in the Ministry of Finance and Planning. To improve negotiation planning for procurement efficiency. The study recommends the management of Ministry of Finance and Planning to define the organization's negotiation objectives, conduct a cost-benefit analysis of potential negotiation strategies, select a negotiation strategy that is most likely to achieve the organization's objectives, implement the strategy, and evaluate its effectiveness and modify or adapt the strategy as necessary to achieve continued success. The findings of this study are based on the data gathered on one governmental body; other public institutions are not

included in the scope of this study. As a result, this study offers prospects for future researchers and academics to further investigate on the unexplored domains.

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Impacts of SIMBANKING Internet Banking Service on Customers Satisfaction for CRDB Bank Plc Performance in Dodoma City, Tanzania

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Abstract

Internet banking is a new banking practice that is becoming more popular as technology advances worldwide, especially in Tanzania. Only a small number of Tanzanian banks, however, have begun to take internet banking seriously in terms of using ATMs, online banking services, using smart cards, banking applications, and paying bills. This study sought to determine the impacts of simbanking internet banking service on customers satisfaction for crdb bank plc performance in Dodoma City. Specifically, it addresses the challenges facing customers on using SimBanking internet banking service for customer's satisfaction in CRDB Plc Bank Dodoma city in order to increase customer satisfaction. The study is qualitatively designed using interview method in data collection. The qualitative research approach was adopted because it enables the data collection from numerous people at once. According to the results, the network issue that prevented customers from using the internet services for SimBanking decreased their satisfaction with the service. Other challenges include power outages, utility fees, subpar customer service, and insecurity. Based on research and debate, it is recommended that users receive security education through building workshops so they can use Sim-banking effectively. Consequently, qualified staff from the TCRA and CRDB might be utilized in these training and workshop sessions.

Key words: Sim-banking, customer satisfaction, internet banking

Introduction

The ICT market is anticipated to grow to over \$5 trillion in revenue in 2021 and to about \$6 trillion by 2023. The ongoing expansion is only another indicator of how pervasive and significant technology has become in modern society. In general, big data and analytics, social, mobile, and computing will be the main drivers of increase in traditional tech spending over the coming few years. The ICT market is often characterized as including software, hardware, and services connected to computer and telephone network technology. The ICT market's telecoms category is expected to provide the most revenue as of 2020 (Mlitz, 2021).

Over the years, information and communications technology (ICT) has significantly contributed to the growth of the banking industry. Because of the developments in information and communications technologies, the banking industry is now more inventive and competitive. By enhancing its internal control systems, the banking industry is better able to meet the needs of their clients thanks to the usage of ICT. Numerous ATMs, Internet banking, mobile banking, smart cards, 24/7 services, as well as the capacity to supply a wide range of goods and services, have allowed banks to enhance the level of service they provide to their clients (Alvarez & El-Darwiche, 2015).

There are several services that banks offer electronically to their clients in order to serve them more effectively and guarantee high levels of client satisfaction. The services that banks offer electronically include online banking to make transactions simple and secure, ATM and debit card services to give consumers access to fast cash, and other services. Customers who use phone banking services gain from time savings, while those who use SMS banking services receive notifications and information. To make it easier for customers to do transactions using mobile phones, there is mobile banking. Point-of-sale banking, multiple ways for transferring money (paisabazaar, 2021).

Physical and geographic constraints as well as other restrictions on banking services are eliminated by electronic banking. Since the late 1990s, banks, brokerage firms, and insurance companies as well as the business press, regulators, and lawmakers from around the world have become more interested in banking over the Internet. The use of technology has advanced

dramatically over the past few years, and as a result, bankers are now observing a sort of evolution in their industry. Development Bank is one of the companies in Ghana's banking sector that has recognized the need to incorporate internet banking into its operations (Mawutor, 2014).

Nigeria's internet banking system demonstrates that card technology and other e-payment equipment are currently the most well-liked products on the country's banking market. According to figures from Interswitch, Nigeria has 30 million ATM card users who use the machines for more than 100 million transactions each month. Over 9,000 ATMs are run by Nigeria's 24 banks throughout the 36 states and Federal Capital Territory. The necessity to better integrate the electronic platform into companies throughout the world has been prompted by the competitiveness in the banking sectors. In order to decrease wait times, errors, expenses, and improve customer service, banks decided to develop, research, and assess internet banking services. With the help of their internet banking services, customers may conduct simple online transactions from their PCs and smartphones at home or at work whenever the opportunity is right, as well as access and learn more about their own specific accounts (Mchomba, 2018).

Due to the development of new technology that makes transactions and other services offered by internet banking simpler, the use of this service is now expanding in Tanzania. Customers can access banking services around-the-clock, anywhere, and without having to go to the bank branch thanks to a variety of online banking options that reduce costs and time. The bank's internet banking service increases consumer traffic while also providing Tanzanians living abroad with the convenience of sending money directly to their accounts back home. The solution offers Tanzanians living abroad an easy and dependable way to transfer money home and manage their bank accounts online. Customers can do transactions using internet banking at their own pace, without experiencing any stress (Kawamala, 2013).

Despite the banks' good intentions, customer complaints about online banking are on the rise. These customer complaints show that they are dissatisfied with the banks' services offered through internet banking. Customers may switch to other banks that they believe can satisfy them if this damages the banks' reputation (Kawamala, 2013). However, there is little understanding of online banking procedures in Tanzania's CRDB Bank Plc and NMB Bank for the operation of the banking sector. In light of the foregoing, this study is designed to evaluate

the effects of SimBanking's internet banking services on patron satisfaction with the effectiveness of the CRDB Bank Plc in Dodoma city.

In Tanzania, there are numerous banks that have rapidly adopted the use of information and communication technologies in their service delivery, creating intense rivalry in the financial sectors. To receive value-based information about investments, money transfers, products, and marketing offers; bringing about techniques that are both efficient and profitable to increase client base, which benefits both customers and trading banks. There are banks that only operate online and don't have physical locations (Mchomba, 2018).

For instance, CRDB Bank Plc's experience indicates that there are 560 CRDB ATMs, 17,031 Agents (CRDB Wakala) who assist CRDB in ensuring dependability and expanding access to electronic financial services, 385 E-commerce merchants, 5 million and above CRDB customers, 243 branches, including franchised and mobile branches, and 1.79 million internet banking transactions carried out in 2020 (CRDB annual report, 2020). Through a network across a nation, the CRDB Bank Plc provides a full range of business and retail banking services as well as microfinance services.

CRDB has more bank agents than NMB bank, despite the fact that NMB has more ATMs (753) than CRDB (560). According to the aforementioned data, CRDB Bank Plc employ internet banking much more than NMB Bank in terms of bank agents, which are 17031 and 8410, respectively. The main issue with bank branches is that the ATMs and agency are not working properly. Additionally, the survey discovered that the clients felt uneasy (Mishwaro, 2013).

However, regardless of the above benefits obtained from internet banking and the adoption of internet banking practices in Tanzania, CRDB bank experiences queue problem which triggers the need for this study in terms of assessing Impacts of simbanking internet banking services on customers satisfaction for CRDB bank performance in Dodoma city.

Literature Review

A review of other literature that focuses on impacts of SimBanking internet banking service on customer's satisfaction for CRDB Bank Plc performance in Dodoma city. Also, theoretical

literature reviews such as the theory of planned behavior. The chapter also provides an empirical literature review, research gap, and conceptual framework of the study. Based on this study, customer satisfaction was defined as the measure of how a product or service given to a customer meets the expectations of that particular customer (Mchomba, 2018). Electronic banking is the product or technology designed for the aim of facilitating online banking that allows the customers to have the smooth experience of accessing the bank services easily and safely. Electronic banking uses the electronic technology efficiently for the aim of providing the customers with the 24/7 online banking services (Timothy, 2012).

Theoretical Review

According to Thomas, (2017) a theory combines different constructs, such as descriptive ability, explanatory power, heuristic value, testability, integration, parsimony, clarity, comprehensiveness, and delimitation. He believed that theory is refined through research and that understanding these constructs enables theory refinement. Theory of Planned Behavior It is one of the most predictive persuasion theories. It has been applied to studies of the relations among beliefs, attitudes, behavioral intentions and behaviors in various fields such as advertising, public relations. This theory helps to understand how the behavior of people can change. The TPB is a theory which predicts deliberate behavior, because behavior can be deliberative and planned (Mchomba, 2018). The theory of planned behavior links the beliefs of an individual to their behavior. It is allowing for the predictability of reasoned actions when behavioral controls are in place (Koger, 2010). The attitudes developed in this theory explain the relationship between individuals and innovation and this ultimately provides the normative position that technology advances performance. The theory also provides important synergies regarding individual's intentions especially in oriented approaches regarding satisfaction, communication and meaningful transfer of information. The essentials of this theory from the perspective of electronic banking are that it provides the framework to create and optimize networks ranging from the internet, social media and thus the ability to performance and create results.

Methodology

The methods utilized to obtain information were the main emphasis of the research methodology section. This section presents the research methodology and design. To improve the study's coverage, the study population and study area were also mentioned.

Due to the population growth brought on by the relocation of government and corporate offices to Dodoma, the capital city of Tanzania, the research was carried out there. The need to develop e-banking services using emerging technologies is accelerated by the rising population in Dodoma and the increased importance of Dodoma to banks. The CRDB Bank Plc Dodoma Branch and CRDB Bank Plc Chamwino Branch, both of which are located in Dodoma town, were chosen from two bank branches. The reason for choosing these two branches above other CRDB branches is that they have a higher percentage of consumers that use bank services.

The quantitative research methodology was used in this study. Since data were only collected once, the design was best suited for investigations where researchers had limited time and resources. This study is structured as a qualitative study, allowing for the collection and analysis of interview data (Ngaida, 2020). As a result, the SimBanking service users and CRDB Bank Plc employees, including the heads of electronic banking and their line workers, were included in the study's qualitative party. These employees were chosen specifically because they regularly interact with clients who use SimBanking services, giving them a deeper knowledge and comprehension of the SimBanking internet service.

The total collection of people is referred to as a target population. Customers from 2 (two) branches of the CRDB Bank Plc in Dodoma city make up the study's target demographic. Interviews were performed with roughly 32 participants, including SimBaking users and CRDB Bank Plc employees from two CRDB branches who interact with Sim Banking service delivery.

The qualitative research approach of interview-based data collection was used to identify obstacles that customers in CRDB Bank Plc Dodoma City face when using SimBanking internet banking service. Information was gathered utilizing the interview approach, specifically from users of the SimBanking service and employees of the SimBanking customer service desks. Personal interviews and, if practical, telephone interviews can be employed to implement this

strategy. In the interview method, the other person or people are often contacted face-to-face as the interviewer asks questions (Kothari, 2004).

A tool for gathering data was the interview guide question. Most interviewers were responsible for gathering the material; each interviewer should adhere to a set of interview guide questions to achieve reasonable uniformity with regard to all important study topics (Kothari, 2004). In most cases, conducting interviews to gather information is done in an organized manner. As a result, it is known as a structured interview. These interviews use a list of predefined questions and extremely uniform recording methods. As a result, the interviewer in a structured interview adheres to a strict scripted method, asking questions in the format and sequence specified (Kothari, 2004).

The content data analysis for the qualitative data from this study was applied. One of the main benefits of content analysis is that, unlike recreating social interactions or gathering data, it can be used to analyze social phenomena and is non-invasive. To analyze qualitative data using content analysis, the following steps were used: (i) choosing the main content for analysis; (ii) providing units and categories of analysis based on the content; (iii) providing a rule of thumb based on the importance of the contents; (iv) coding the text based on the rule of thumb; and (v) analyzing the findings and drawing conclusions.

Findings And Discussion

Challenges facing customers on using SimBanking internet banking service for customer satisfaction in CRDB Bank Plc

The following findings were revealed from the challenges facing customers on using SimBanking internet banking service for customer satisfaction in CRDB Bank Plc. The findings from interviews revealed the following challenges; network problem, power down, service charges, biasness, and security problems.

Security problem

Security problem was identified as a barrier to clients using the simbanking service in order to satisfy them. The results showed that there are theft difficulties that are brought on by a lack of

security when utilizing the Simbanking Internet Banking service, as demonstrated by the following interview:

“.... Through simbanking services, we continue to receive a large number of cybercrime instances. In order to tackle the issue, as a financial institution we are collaborating with the police to guarantee that theft concerns extend beyond simbanking to other areas of banking....” **(Interview made with one of CRDB Bank Plc staff on June 2022).**

These findings suggest that customers are deterred from using the service by the issue of security and instead choose to utilize other alternatives, which are a result of the difficulty in using the service. These results are consistent with those of Mboma & Phelician (2015) who studied attitudes, sim-banking usage, and customer happiness in Tanzania. In their study, it was discovered that non-users' concerns about the security of their asset-cash and high service fees hindered use and satisfaction. The lack of security assurance, however, was one of the issues causing low sales of Simbanking despite its enormous customer base, according to Mneney's (2013) study on the factors affecting the performance of simbanking. These findings were corroborated by the UTAUT theory, which contends that one aspect to take into account when using a Simbanking online service is the social effect, which refers to the extent to which people believe they can utilize the new system since others do (Morris, 2003). Therefore, having a lack of security when using the Simbanking service leads to poor client satisfaction with the services provided.

Service charges

High service fees were determined to be a barrier to clients using the simbanking service in order to satisfy them. According to the research, service fees are one of the difficulties users of Simbank's internet banking service face in using the service to their satisfaction. This is demonstrated by an interview that: “

“.... Depending on the amount you wish to deposit or withdraw, there are minimal service costs that are accessible to every customer during transaction processes...” **(Interview made with one CRDB Bank Plc staff on June 2022).**

These findings show that customers have more options when it comes to institutions, thus they won't be satisfied with those that have greater service fees. These findings concur with those of Imran et al. (2019), who found a substantial positive association between low charge distribution and e-logistic customer satisfaction. These findings were corroborated by the UTAUT theory, which contends that one aspect to take into account when using a simbanking online service is the social effect, which refers to the extent to which people believe they can utilize the new system since others do (Morris, 2003). As a result, the availability of high charge distribution (service costs) will be detrimental and unrelated to consumer happiness.

Unstable network accessibility

A network issue was identified as a barrier to clients using the simbanking service in order to satisfy them. The results showed that there is a networking issue, with the majority of users complaining about a delay in receiving transaction messages at the time the transaction was made, as demonstrated by an interview that:

“....We are currently working to ensure that our clients have access to improved service, even as we work harder to adapt our organization to the growing number of customers.....” (Interview made with CRDB Bank Plc staff on June 2022).

According to the remark above, network issues make it difficult for customers to obtain services when they most need them, which lowers customer satisfaction. These findings are consistent with those of Kigunia (2014), who found that there were many subpar services in this field, including the combination of network quality and weak relationships between satisfaction and satisfaction. These findings were corroborated by the UTAUT theory, which contends that one aspect to take into account when using a simbanking online service is the social effect, which refers to the extent to which people believe they can utilize the new system since others do (Morris, 2003). Therefore, unstable network when using sim-banking it's considered the lead to poor customer satisfaction towards using the services.

Power down/system collapse

Power outages were identified as a barrier to clients using the SimBanking service to their satisfaction. According to the research, system/power down is one of the difficulties users

encounter when using the Simbanking internet banking service, as demonstrated by an interview that:

“....The workload from clients' high transaction volumes and other internal tasks the institution performs, such as sending, receiving, and other office manipulations, might cause system collapse at times....” **(Interview made with one of CRDB staff on June 2022).**

According to this remark, a system outage prevents customers from using the service effectively, which lowers their level of happiness. These findings concur with those of Mangi (2012), who identified power rationing as one of the difficulties facing simulation banking. These findings were corroborated by the UTAUT theory, which contends that one aspect to take into account when using a simbanking online service is the social effect, which refers to the extent to which people believe they can utilize the new system since others do (Morris, 2003). Power outages, which happen when there isn't enough electricity and a consumer needs the service at a specific moment, result in low customer satisfaction with simbanking internet service.

Unsatisfied customer service

unsatisfied customer service was identified as a barrier to users using the Simbanking service in order to meet their needs. When a consumer wants to deposit or withdraw a substantial amount, simbanking is not adequately addressed, according to the findings, as demonstrated by an interview that:

“....The total amount of withdrawals or deposits allowed through SimBanking services is limited. Because the majority of customers are complaining about this, we are still collaborating with telecommunications firms in order to grow....” **(Interview made with one of CRDB staff on June 2022).**

According to the interviewee's perceptions, customers are not satisfied because there is a limit on their own finances because they have to make decisions and limit the quantity of transactions for the services they can make. These findings concur with those of Loishiye (2016), who found that

the majority of respondents utilized NMB mobile banking providers and that rapid service and accessibility were important motivators for using simbanking.

These findings were corroborated by the UTAUT theory, which contends that one aspect to take into account when using a simbanking online service is the social effect, which refers to the extent to which people believe they can utilize the new system since others do (Morris, 2003). As a result of these discoveries and research, it has been determined that utilizing simbanking is biased and one of the difficulties; as a result, clients are chosen to utilize the services based on their preferences.

Conclusion and Recommendations

Conclusion

The study revealed that there is a weak network towards simbanking to the clients based on the findings from qualitative information, which are contrary to the view of CRDB banking authorities. As a result, if the network issue is the biggest obstacle to customers' contentment with sim-banking, an increase in the level of difficulty will result in a decline in their level of satisfaction. In order to increase client happiness, it is necessary to look at simbanking internet service from the perspective of a reliable network.

Recommendations

Stabilizing the network is advised in order to draw clients and subsequently raise their happiness with utilizing the simbanking online service. This might be accomplished by developing their online simbanking services for the benefit of their clients' convenience, safety, affordability, and timeliness.

Based on research and debate, it is recommended that users receive security education through building workshops so they can use sim-banking effectively. The system will be more beneficial as a result. Consequently, qualified staff from the TCRA and CRDB Bank Plc might be utilized in these training and workshop sessions.

The government needs to do a better job of enforcing the laws and rules governing simbanking. To accomplish this, it is advised that illegal practices be addressed by the judiciary, police, and other intelligence agencies.

Therefore, CRDB Bank Plc and other financial institutions should improve the training of their internal staff (mostly technicians) to guarantee that there is sufficient human capacity to support and maintain sim-banking

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The Influence of Revenue Administration on Revenue Collection

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Abstract

Despite the fact that most Tanzanian local government bodies have experienced problems with internal control, the country's financial control mechanisms are nonetheless taken into account. The purpose of this study was to evaluate how financial control mechanisms affected revenue collection. A cross-sectional design was used to collect data from all 41 respondents, or 100% of the sample. There were 12 department heads, 13 accountants, 6 internal auditors, 3 economists, 5 administrative units, and 2 trade units among the respondents. According to the study's findings, local government authorities' income collection is strongly and favorably correlated with budget planning and revenue administration. Even though there is no direct link between assessing internal control systems and revenue collection, the study found that revenue collection is improved by routinely reviewing internal control systems to assure revenue protection. The implementation of the financial control system is then advised, with public officials being committed to doing so to the best of their abilities.

Key words: Budget planning, Internal control system and Information technology application

Introduction

Kipilimba (2018) looked into how tax administration affected government revenue in the Dar es Salaam area. 85 of the 100 targeted respondents from the study region completed questionnaires to provide information, which was used to collect the required data. The study's conclusions, which have been analyzed using descriptive and inferential statistics, demonstrate that good tax

design, effective tax policy and laws, tax administrative structure, tax collection methods, proper use of a computerized system of maintaining taxpayer register, outsourcing revenue collection to private tax collectors, internal and external capacity building, intensive coordination with other entities, and proper maintenance of taxpayer's records are the key factors in tax administration. Tax issues are found to exist in areas where there is corruption or a lack thereof.

Financial controls are methods, policies, and processes used by an organization to monitor and manage how its financial resources are used, allocated, and directed. Evaluation of financial controls is intended to assist institutions in reviewing and evaluating the hierarchy of responsibility within the company. An efficient internal financial control system provides confidence regarding the accuracy of financial reporting, asset protection, and the integrity of financial reporting (Doyle and McVay 2016).

In the majority of public institutions of developing nations, particularly African countries, the absence of an efficient financial control mechanism has been a serious problem. For instance, Aduam (2015) demonstrated that the Techiman Municipal Assembly (TMA) in Ghana does not fully adhere to internal financial control standards, which results in inefficiencies. Mwachiro (2013) noted that insufficient internal controls, such as the financial management system and legal control system, have promoted collaboration to fraud, loss of money, and misappropriation of collected revenue. He made this observation with relation to the Kenya Revenue Authority.

The ineffectiveness of financial control among local government bodies across the country, which is crucial for maintaining successful tax collection, is therefore justified. The proposed study was necessary since the available studies could not provide conclusive answers to the question of how financial control affects revenue collection. In order to evaluate the impact of financial control on tax collection in Tanzania, this study used the Chemba district as a case study. Therefore, doing this research was beneficial for Tanzanian policymakers, the general population, and other stakeholders such as academics and researchers.

Despite government initiatives to assist LGAs in enhancing their capacity to collect taxes, alleged issues with tax collection in LGAs continue to exist. Additionally, the CAG report for the previous three financial years revealed trends in tax collection in LGAs in the Dodoma region,

Four LGAs, Dodoma City Council (121%), Kongwa DC (71%), Kondoa DC (96%) and Mpwapwa DC (64%) were found to be collecting more than 50% of the intended income, while the three remaining LGAs, Chemba DC, Bahi and Chamwino DC, were not stable. For example, in 2019/2020, the average revenue collection was 22%, 32%, and 40%, respectively. The CAG study shows that these LGA's revenue collection was much below 100% (URT, 2019).

Even though several empirical studies, including (Msenga; 2020, Zilipa; 2020; PMO-RALG, 2019) have been carried out in local government authorities in the Tanzanian context to explore gaps between estimated revenue requirements and actual revenue collections, the studies show that poor revenue collections are caused by inexperienced staff, corruption, and subpar plans and policies. The factors of financial control systems, such as budgeting, managing revenues, and using ICT to collect revenues, were disregarded (Mugambi, 2019).

Because budget planning, revenue administration, and ICT application are crucial for enhancing revenue collection in certain LGAs, this study examined the impact of financial control on revenue collection with a focus on these three elements of the financial control mechanism.

Literature Review

Theoretical Foundation

The study was founded by the public choice theory. According to Richard (2009), governments were able to use the public choice theory at first as a budget-maximizing model to maximize their own economic gains.

The effectiveness and high revenue collection of public choice theory's systems and features enhance the high revenue collection performance required to hasten the socioeconomic growth and development of the nation. This idea serves as the cornerstone for high revenue collection to adequately fund service delivery, socioeconomic development, and growth at the community level (Muriisa, 2008; Namoit, 2012), hence accomplishing the LGAs' goals for financial control.

The study determined that it was appropriate to employ the financial control mechanism as a motivator of revenue collection as the independent variable since it influences revenue collection in LGAs, in accordance with the public choice theory's hypothesis. Although the theory states that revenue administration and budgeting are crucial components of financial management mechanisms, logically.

Empirical Foundation

Chindengwike *et al* (2021) studied on The Impact of Approved Budget on Promoting Outsourced Revenue Collection Performance of Local Government Authorities in Developing Countries. The study relies on secondary data and a time series research methodology.

The population applied based on approved budgets and actual income receipts from the financial years 2009/10 to 2018/19 (Quarterly data). 44 observations made up the study's sample size. The Arusha City Council (ACC) was purposefully chosen as an example for this study's research site. With a P-Value of 0.00, the results showed that there was no long-term correlation between the approved budget and the actual collections.

According to the study's findings, there is a discrepancy between the approved budgets for LGAs and the actual income collections because of bad predictions, poor negotiations between the government and. This study goes beyond by using both primary and secondary data also the study used a sample of 41 respondents.

Kipilimba (2018) looked into how tax administration affected government revenue in the Dar es Salaam area. 85 of the 100 targeted respondents from the study region completed questionnaires to provide information, which was used to collect the required data. The study's conclusions, which have been analyzed using descriptive and inferential statistics, demonstrate that good tax design, effective tax policy and laws, tax administrative structure, tax collection methods, proper use of computerized system of maintaining taxpayer register, outsourcing revenue collection to private tax collectors, internal and external capacity building, intensive coordination with other entities, and proper maintenance of taxpayer's records are the key factors in tax administration. Tax issues are found to exist in areas where there is corruption or a lack thereof.

Benard and Nzuki (2018) conducted research on information communication technology considerations and revenue collection in Nairobi City County, Kenya. The study's target population was 115 people, and a sample size of 35 respondents who worked in 8 different government departments and sectors of Nairobi City County was used.

Questionnaires with the drop and pick approach were utilized as the data gathering method. Questionnaires had both closed-ended and matrix items with a Likert scale of 0–4. The quantitative data were examined using both descriptive and inferential statistics. According to the study, rules had a substantial impact on the financial allocations of revenue collection, employee attitudes of revenue collection, and information and communication technology revenue collection. However, the study was limited with small sample size, the study also using only questionnaire as data collection method and analyze only quantitative data. This study extended the sample size up to 41 respondents with other data collection methods such as interview and documentary review. Moreover, this study analyzes both quantitative and qualitative data.

Conceptual Framework

The study identifies gap from previous studies related to revenue collections. Since the previous studies had not given clear-cut solutions to the effect of financial control on revenue collection in revenue collection. Studies have also been conducted on the effects of the authorized budget on boosting the effectiveness of outsourced revenue collection, the impact of tax administration on government revenue, and the relationship between revenue collecting and information communication technology (Chindengwike *et al.* 2021; Kipilimba, 2018; Benard and Nzuki 2018). Therefore, this study contributed the existing knowledge gap by assess the effect of financial control on revenue collection in revenue collection Dodoma region

The steps that must be followed during the investigation are outlined in the conceptual framework based on the researcher's past knowledge of other researchers' perspectives and his observations regarding the research issue. It is a summary of the literature on how to explain a phenomenon made by the researcher (Patrick, 2015).

From the study, the dependent variables (components of the financial control mechanism) such as budgeting, revenue administration, and information technology application were used to measure trends in revenue collection (growth or decrease).

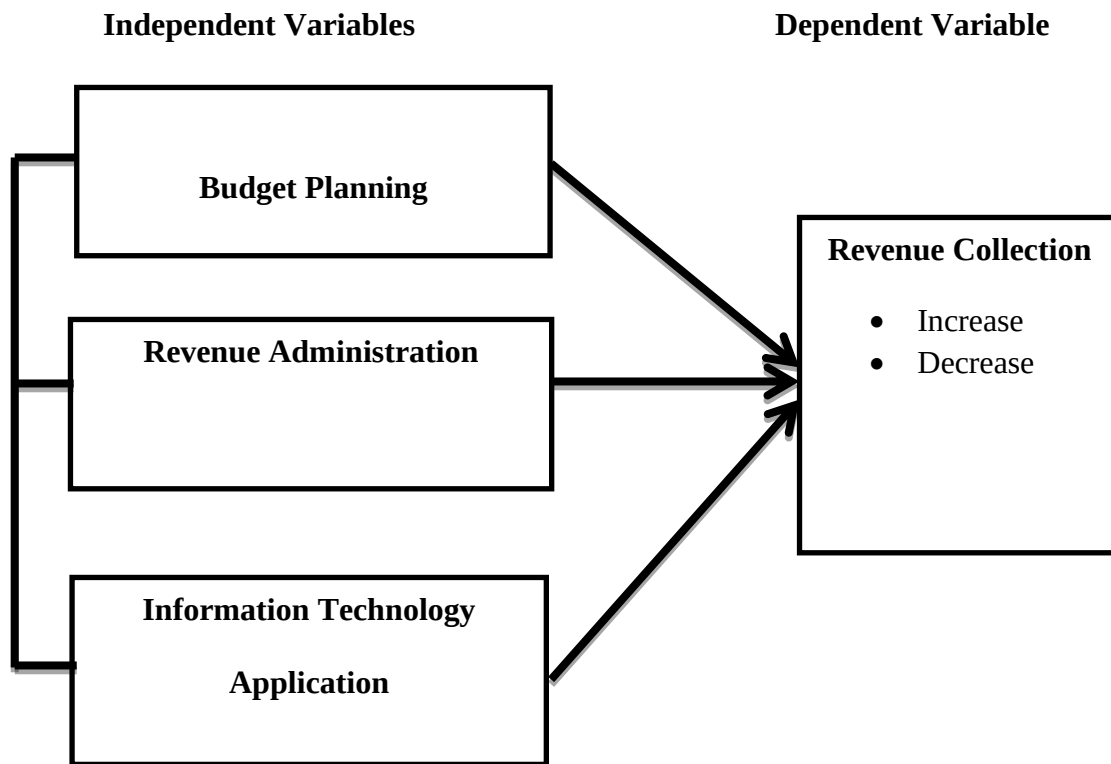


Figure 7: Conceptual Framework

Methodology

The district of Chemba was the site of this study. The location was chosen because, according to the CAG report for the previous three financial years, the trends of revenue collection in Chemba DC, Bahi, and Chamwino DC were not stable, as evidenced by the fact that the average revenue in 2019/2020 was 22%, 32%, and 40%, respectively. The CAG study shows that these LGA's

revenue collection was fewer than 100% (URT, 2019). Employees that is in charge of the administration and collection of the council's own sources of revenue made up the population of this study. Department heads, accountants, internal auditors, traders, economists, and administrative personnel are among these personnel.

The cross sectional design used in this study was chosen because it offers a clear result and the characteristics related to it at a certain period. Since cross section research focuses on data collecting at a single point in time, it was appropriate for this study.

The study used purposive sampling, in which the sample represented a sizable population in the concerned area with the same characteristics. The study's purposive sample method was utilized to identify personnel in LGAs who deal with revenue administration. The purposeful sampling technique was appropriate for this study since it is a kind of non-probability sampling that works best when a group of qualified experts is needed to study a particular cultural domain. Additionally, a non-probability sample strategy was used in the study, and purposive sampling was used to select respondents (Creswell, 2012).

The number of units utilized to obtain estimates of a certain population is known as the sample size (Creswell, 2012). A total of 41 respondents, including 12 department heads, 13 accountants, 6 internal auditors, 3 economists, 5 administration units, and 2 trade units, made up the sample size for this study, the sample size distributions shown in Table 1 below.

Table 1: Sample Size Composition

Type of Respondent	Population	Procedure	Total
Heads of departments	12	12* 100%	12
Accountancy	13	13* 100%	13
Internal Auditors	6	6* 100%	6
Administration	5	5* 100%	5
Trade unit	2	2* 100%	2
Economist	3	3* 100%	3
Total			41

Source: Fieldwork research (2022)

There are two different kinds of data: main and secondary. The two forms of data that are gathered for a project are primary and secondary data (Johnson & Christensen, 2017). When a particular need arises, primary data are gathered, but secondary data are previously gathered data that have been made public and can be used as a source of information for new researchers (Johnson & Christensen, 2017). While secondary data were already gathered and statistically analyzed, primary data were first-hand observations.

In order to gather primary data for this study, questionnaires and interviews were used. The most popular method when respondents can be reached and are willing to cooperate is a questionnaire. Many subjects who have the ability to read and write on their own can be reached using this technique. According to Creswell (2012), a questionnaire is a systematic collection of inquiries made to a population sample from which data is sought. The questionnaire is a tool used to methodically and objectively gather data for the study (Creswell, 2012). The selected Local Government financial and management reports, research reports journal, and online sources were used in a documentary review to gather secondary information.

For the purpose of the study, closed-ended questions were employed to collect numerical data, which was then analyzed using descriptive statistics. The analysis produced a data array that was used for further data analysis using the statistical package for social sciences (SPSS) computer program. Descriptive statistics capabilities in SPSS Version 20 help in comparing responses to variables and clearly show response frequencies, percentages, means, standard deviations, and variance results.

Multiple linear regression analysis was used in inferential statistics to establish the link between the research variables. Because the dependent variable (revenue collection) is a continuing variable, the multiple linear regression model was chosen. Budgeting, revenue management, and information technology application were considered independent variables, whereas revenue collection is treated as the dependent variable in the model. The equation presents the model:

$$Y = \beta_0 + \beta_1 BPL + \beta_2 RADM + \beta_3 ICTAPPL + \varepsilon \dots \dots \dots (1)$$

Where:

Y = Revenue collection

β_0 = Y-intercept (constant) in regression

β_1 = Estimated regression coefficient of budget planning (BPL)

β_2 = Estimated regression coefficient of revenue administration (RADM)

β_3 = Estimated regression coefficient of ICT application (ICTAPPL)

ε = Random variable introduced to accommodate the effect of other factors that affect revenue collection variables that are not included in the model.

Findings And Discussion

To determine the impact of the financial control method on revenue collection, multiple regression analysis was utilized. The local government authorities, specifically Chemba district, employed budgeting planning, revenue administration and information technology administration as the variables to anticipate the revenue collection system.

Model Fit

The coefficient of determination (R square), which is shown in Table 1, is 0.876 (87.6%), indicating that variation from the total variation is explained. Therefore, revenue collection is explained by 87.6% of the independent variables such are budgeting planning, revenue administration and information technology administration. The explained variance outweighs the unexplained variation from the total variation, which suggests that the model is well-fit.

Table 28: Model Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.936 ^a	.876	.866	.33108

Source: Fieldwork research (2022)

Variables in Equation

Analyzing the impact of financial control mechanisms on revenue collection involved using inferential statistics. Multiple regression analysis was used in this part based on the type of data. The data from the multiple regression model described in the following mathematical equation is shown in Table 2.

$$Y = 0.588 + 0.519X_1 - 0.042X_2 + 0.291X_3 + \varepsilon$$

Where:

X_1 = Budget planning

X_2 = Revenue administration

X_3 = Information technology application

ε = Error term

Y = Revenue collection

Table 29: Multiple regression results

Model	B	Std. Error	Beta	t	Sig	Tolerance	VIF
(Constant)	.588	.228		2.580	.014		
Budget planning	.519	.099	.643	5.238	.000	.223	4.488
Revenue administration	-.042	.149	-.042	-.284	.018	.156	6.415

Information application	.291	.086	.384	3.398	.002	.264	3.791

Budget planning

According to the study's findings, which are shown in Table 2, budget planning is strongly positively correlated with revenue collection at a p-value of 0.000. Additionally, the results show that for every unit more spent on budget planning, revenue collection rises by 51.9%. This was supported by qualitative findings which put on view:

“...In Chemba District, we approve every budget through a councilors meeting prior to its execution, just like any other local government body. Additionally, when it comes to national policy, laws, and regulations, the Chemba district often allocates the money in accordance with what the councilors committee had intended...” (Head of department No. 1)

These findings suggest that local government budget planning is planned, adheres to all LGA regulations and procedures, and so enhances revenue collection. Therefore, it is necessary to make the most of the LGA's budget in order to boost income collection in order to achieve economic development. These findings were corroborated by the public choice theory, which, according to Richard (2009), is useful in designing budget-maximizing systems and features that encourage the high revenue collection performance required to hasten the socioeconomic growth and development of the nation through its efficiency and high revenue collection.

Revenue administration

According to the study's findings, which are shown in Table 2, revenue administration and revenue collection are significantly inversely associated ($p=0.018$). Additionally, the results show that for every additional unit of revenue administration, revenue collection falls by 4.2%. This was supported by qualitative findings which put on view:

“...As a local government authority, our duty to evaluate the staff's responsibilities and duties stimulates a significant increase in revenue

collection, as we observed in different to prior years. As a result, this year's revenue collections are not increasing in proportional rate...."

(Head of department No. 4)

These findings imply that local government authorities' implementation of revenue administration in accordance with policies, rules, and regulations is not as effective as it should be, which lowers revenue collection. This indicates that the majority of LGA employees and Chemba in particular, lack accountability, undermining internal control mechanisms. Public choice theory, which, according to Muriisa (2008) and Namoit (2012), becomes the basis of high revenue collection to sufficiently fund service delivery, socioeconomic growth, and development at the grassroots level, was found to be supportive of these findings.

Information technology application

The study's findings, as shown in Table 2, indicated that the use of information technology is considerably positively associated to revenue collection at $p=0.002$. Additionally, the results show that for every additional unit of information technology application, revenue collection rises by 29.1%. This was supported by qualitative findings which put on view:

*"...You are aware that the Local Government Revenue Collection Information System (LGRCIS), like other online systems, makes it simple to achieve the desired outcomes because it is the most accessible to the internet and runs the most actions in a short amount of time...."***(Head of department No. 7)**

These findings suggest that there are information technology applications that are highly helpful for collecting money, which leads to an increase in revenue collected over time. These findings were corroborated by the public choice theory, which, according to Richard (2009), is useful in designing budget-maximizing systems and features that encourage the high revenue collection performance required to hasten the socioeconomic growth and development of the nation through its efficiency and high revenue collection.

Conclusion And Recommendations

Conclusion

The implementation of the national budget in accordance with councilor approval results in improved revenue collection. By allocating funds according to the budget, the local government authority increases income collection. The planning of the budget is improved by considering the financial environment, revenue and expenditure predictions, debt status, affordability analysis, and strategies for achieving and maintaining financial balance. Although there is a poor tendency to examine revenue obtained, a regular evaluation of the administration policy for revenue collection enhances revenue collection. Because of this, the assessment and appraisal of the revenue staff's tasks and responsibilities increase revenue collection. Therefore, it was determined that revenue collection is improved by routinely examining internal control systems to assure revenue protection, even though there is no direct correlation between doing so and revenue collection. Improved revenue collection is made possible by the LGRCIS's ability to record and identify all actual and potential sources of income. As a result, the Local Government Authority's revenue collection is improved or increased because there are enough POS machines enabling the Council to collect money from all villages and streets. Online tax payments have thereby assisted the council in increasing its revenue collection, which has led to an increase in revenue collection.

Recommendations

To boost revenue collection, the government should support efficient budget planning, revenue administration, and information technology use. In order to improve and boost revenue collection for revenue administration, policies should also be changed. In order to apply the financial control system to the best of their abilities, public authorities need also be committed.

The study expects to contribute to other academicians as the reference and more than that it generates awareness to the local government authority in the effectiveness of financial control on revenue collection as the result of improving their performance.

Due to insufficient time and resources that this study was encountered, it's suggested that the further studies need to be generated with sufficient time and resources in order to ensure effective accomplishment of the quality of report.

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Impact of Food Waste Minimization Options Towards Green Logistics Practices Among Small and Medium Restaurants in Dodoma City

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Abstract

Food waste is a problem that the food and beverage industry sector continue to struggle with. To date, more restaurants are becoming environmentally conscious by reducing their food waste to a minimum. To ascertain this, a study tried to establish the extent to which food waste minimization options contributed to green logistics practices among small and medium restaurants in Dodoma City. The study adopted case study design where data were collected through questionnaire, interview and observation. Purposive sampling was adopted to select small and medium restaurant managers/owners. Descriptive statistics, independent sample t-test, Likert scale, correlation coefficient, regression and content analysis were employed in data analysis. The study revealed that food waste prevention strategies applied have significant contribution by ($P < 0.05$) to the green logistics practices when adopted and managed in good manner hence minimizes food waste, food waste management methods applied have significant contribution by ($P = 0.017$) to the green logistics practices. The study concluded that huge amount of food is generated in small and medium restaurants and reduce and reuse are some of waste minimization options used by small and medium restaurants. The study recommends that Anti-waste application can be developed to mitigate the problem of food waste.

Keywords: Food Waste, Food waste minimizations options, Green logistics practices.

Introduction

One-third of the food produced in the world for human consumption every year, approximately 1.3 billion tons, gets lost or wasted. Food losses and waste amount to roughly US\$ 680 billion in industrialized countries and US\$ 310 billion in developing countries (FAO, 2016). Since colonial

era, solid waste management in urban areas has been regarded as a public goods and services where by the Government has the duty to provide the Solid Waste Management services. In order to handle this government formed different legislations for the service of managing waste (Maduhu and Makori,2019)

The food and beverage business sector continues to grapple with the issue of food waste. Restaurants are currently becoming more environmentally mindful by minimizing their food waste. Restaurants may conserve the environment and achieve sustainability by reducing food waste. In the end, restaurants will also make more money (Nimbly, 2021).

The Environment Management Act (EMA) of 2004 is the umbrella law on environment management in Tanzania. Section 114 (1), 118 and 119 of the Act stipulates the duty of local government authorities in managing and minimizing solid waste. It provides for the existence of the National Environment Management Council (NEMC). Other legislations governing municipal solid waste management includes; Environment (Solid Waste Management) Regulations, of 2009; which applies to all matters pertaining to Solid waste and the Environment Management (Hazardous Waste Control) Regulations of 2009 which applies to all categories of hazardous wastes, including e-waste for which currently there is no specific policy/regulations.

A number of studies have been conducted regarding the problem of food waste in Tanzania. Maduhu and Makori (2019), Razafinirinamaharavo (2021) and Gabagambi (2018) documented on food waste management in Tanzania. The study sought to better understand the issues related to inappropriate waste management and current practices in managing food waste. However, interventions undertaken in Tanzania as well as in other countries that can potentially improve livelihoods of urban poor and create jobs for youth through digitalization of food supply chain by reducing the amount of food waste.

Despite the numerous investigations done on various areas of food waste management. Food waste in the small and medium restaurants are ignored. In restaurant industry, this problem is critical to the economy. To date not much is known about the effectiveness of food waste minimization options in different restaurants in the food supply chain, particularly in Dodoma City. Therefore, this study intended to analyze the impact food waste minimization options towards food waste management among small and medium restaurants in Dodoma city.

Literature Review

Theoretical review

The study was guided by Stakeholders' Theory. The stakeholder theory was proposed for the first time by Edward Freeman in 1984, whereby the emphasizes was on addressing morals and values in managing organizations. The theory defines stakeholders as groups or individuals who benefit or suffer from an organization performance. They include shareholders, customers and the community at large. The proponent of the stakeholder theory believe that organizations have the duty to ensure that their performance fulfil the expectations of all stakeholders (Freeman *et al*, 2004). The critics of the stakeholder theory lie on its inclusion of non-human stakeholders such as the natural environment (Capron, 2003). Phillips and Reichart (2000) argue that only human beings can be considered as organizational stakeholders and criticizes attempts to give the natural environment a similar status. According to Angelo and Vladimir (1998), large and small restaurants are amongst risky businesses with many forms of operating and financial risks impacting their ability to stay in business. Among those risks are: changes in consumer tastes and discretionary spending patterns; changes in general economic conditions; public safety conditions or concerns such as outbreak of diseases; demographic trends; the cost of food products, labor and energy; competition; and governmental regulations. These risks jeopardize investments in restaurants at considerable risk, resulting in many business failures, despite the fact that the restaurant industry is booming. Thus, management of risk requires a focused and dedicated management team with good understanding of the determinants and/or causes of uncertainty. This would help them to implement policies and strategies that would help reduce risk, and thereby maximize firm value and shareholders' wealth (Brenner and Smidt, 1998). Since the results of this investigation support the idea of food waste minimization options on food waste management among small and medium restaurants can be seen and realized if there is good cooperation, relationship and interaction between various stakeholders. That will help to put much pressure on the effective food chain practices as the way of reducing food waste problem and/or mitigating it is among eateries. The theory fits in this study because the impact of food waste minimization options towards green logistics practices among small and medium restaurants can be seen and realized if there is cooperation, relation and interaction between various stakeholders. That will help to put much pressure on the prevention, reduction and waste management as the way of minimizing food waste among small and medium restaurants.

Empirical review

Filimonau and Sulyoki (2021), conducted a study on the challenges of food waste management in restaurants of a mid-sized Hungarian city. The study explored the phenomenon of food waste in the foodservice sector of Hungary, an EU-28 economy in transition. It provided a first benchmark of food waste generation in Hungarian foodservices. It also identified institutional, contextual, locational, organizational and cultural factors that impeded food waste prevention and mitigation. Drawing on international experience and best practices in food waste management, recommendations were made on how these factors should be addressed. The study demonstrated that limited managerial recognition of the FW problem hampered the adoption of preventative approaches to its minimization. This was further exacerbated by the presence of institutional, contextual, locational, organizational and cultural factors that hindered effective FW management. Drawing on international experience and best practices, the study provided recommendations on how the effectiveness of FW prevention and mitigation in Hungarian foodservices can be improved. However, the study failed to highlight how food waste management could lead to green logistics practices among small and medium restaurants.

Another study conducted by Drewitt (2013), on Food Waste Prevention in Quick Service Restaurants (QSRs) in Bulgaria, where by a comparative case study was used on quantity, source, cost and cause by comparing Chinese Restaurants with European Restaurants, suggested that, in order for restaurants to reduce food waste, the study highlighted that there is a general need for QSRs and restaurants to focus more on monitoring, measuring and identifying the source of avoidable food waste; conduct regular full-costing calculations to understand and provide incentives for food waste minimization; and identify ways to legally reuse serving food waste in other menu items as opposed to simply throwing it away.

Maduhu and Makori (2019), conducted a study on Food waste management in coastal hotels by analyzing opportunities and challenges in Tanzania. The study used descriptive type of research design where both desk research and field research were used while data were collected by using interview and questionnaire. The study findings revealed that, proper management of food waste can lead to higher profitability and save environmental pollution. The study recommended that, government of Tanzania to supervise its environment in general to ensure that pollution including one which caused by wasting foods is reduced or totally eliminated by enforcing laws,

rules and regulations regarding environmental pollutions. Applications of necessary solutions should be seriously practiced and if possible, changes of laws and high punishment should be introduced. This will contribute a lot of changes economically and socially national wide, and make Tanzania the best place to live for everyone.

These studies remarked that restaurants experience a high level of stakeholder scrutiny while practices to achieve green capability, environmental management of restaurants may strengthen their economic goals, there is a positive relationship between food waste minimization options and green logistics practices. However, much has been written on effective food waste minimization options in hotels and solid waste in general but less has been done to small and medium restaurants. Therefore, the main objective of the proposed study is to fill the gap in the literature by analyzing the impact of food waste minimization options among small and medium restaurants in Dodoma city which will increase green logistics practices.

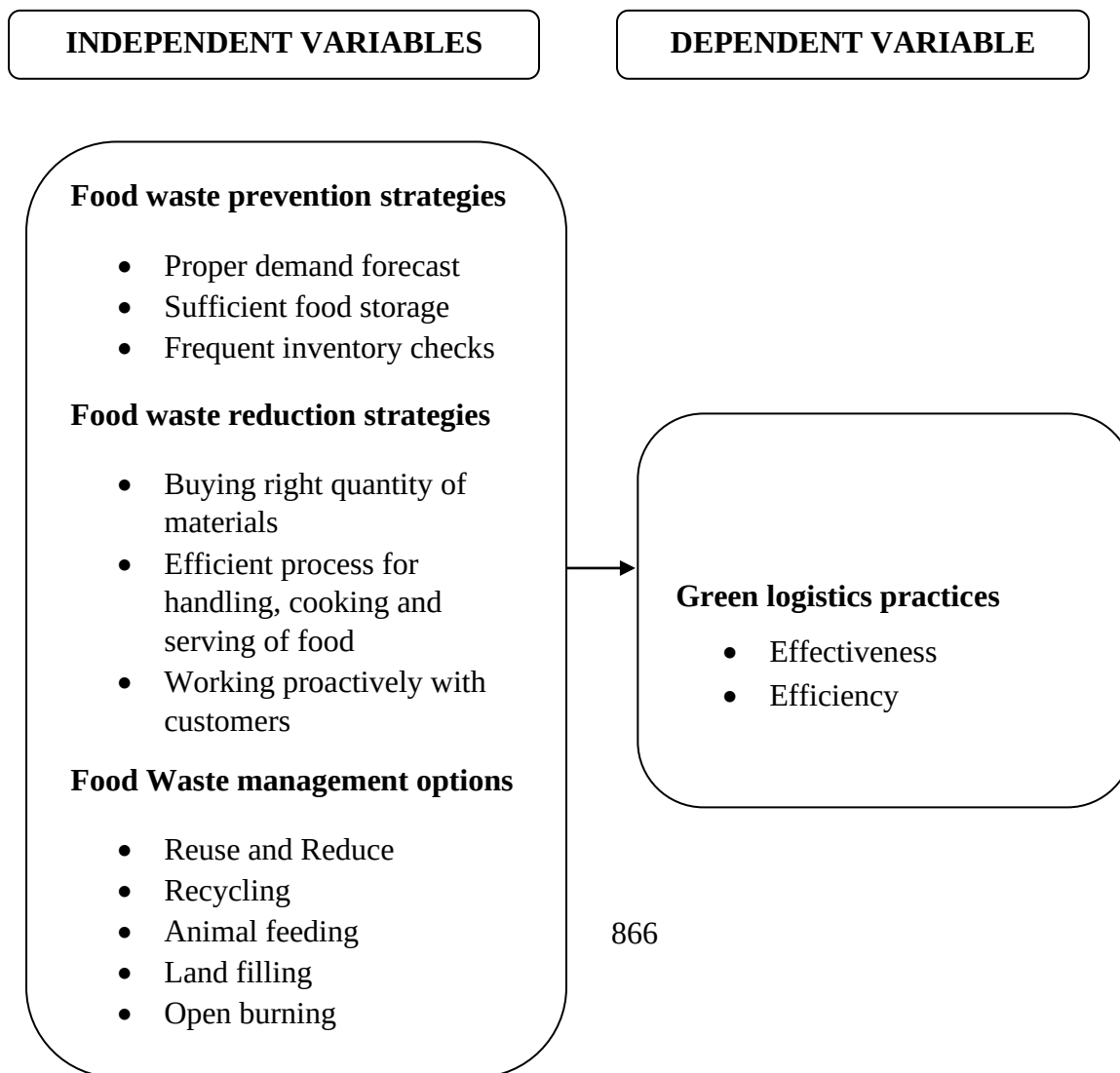


Figure 1 Conceptual framework

Methodology

Study Area

The study was carried out in Dodoma City with 80 selected restaurants. The area was selected, due to the fact that, it has experienced rapid increase in restaurants due to urbanization and decision by the government to shift Government City to Dodoma. On the other hand, the increase in population is associated with high business growth, particularly on food sector to respond to the needs of the population.

Research Design and Sampling Procedures

This study adopted a case study design because it allows careful and complete observation of an individual or a situation or an institution, where efforts are made to study each and every aspect of the concerning unit in minute details and then from case data generalizations and inferences are drawn (Kothari,2013). The reason of adopting this design was because it offered an opportunity to study a particular subject, e.g. one organization, in depth, or a group of people, and usually involves gathering and analyzing information; information that may be both qualitative and quantitative. Several studies used Case study design like study by (Jvlajic, 2016) on Managing perishables in small and medium retail enterprises and (Kipkulei,2013) used a descriptive case study approach to address how employee skills and training in IT inventory control application affect the problem of perishable waste. The target population under this study was small and medium restaurant managers/owners whereby the total number was 391 restaurants. The restaurants represented large number of restaurants industry in Dodoma city, hence their population provided a clear picture on effective food waste minimization options in Dodoma City. The study drew respondents from this population. Purposive sampling was adopted to select small and medium restaurant managers/owners This study constituted a total of 391 registered restaurants as per Dodoma Council's Department of Finance and Trade, June,2022 from which respondents that provided all the relevant information for the study was selected. The sample size was obtained from the total number of 391 restaurants in the study area by using mathematical formula as follows:

$$n = \frac{N}{1 + N(\epsilon)^2}$$

Where,

n = Sample size,

N = Total number of restaurants,

ϵ = marginal error, for example 10% (0.1) will be used to obtain manageable respondents (Yamane, 1967)

Thus,

$$n = \frac{391}{1+391(0.1)^2} = 80 \text{ restaurants}$$

$$n = 80 \text{ restaurants}$$

The sample for this study was 80 restaurants out of 391 restaurants whereby the respondents were obtained from restaurants and offices. The reason for such sample size is due to the nature of the population being scatted type of restaurants hence become hard in obtaining respondents, another reason is due to limited capital whereby large sample size would need much capital. Data were collected through questionnaire, interview and observation.

Data Analysis

Quantitative data was analyzed using descriptive and inferential statistics methods by using Statistical Packages of Social Sciences (SPSS) version 21. Descriptive statistics methods were used to estimate frequency and percentage in analysis of characteristics of respondents. While inferential statistics was used to determine causal relationship between independent and dependent variables. Therefore, testing the correlation between individual food waste minimization methods and green logistics practices, Pearson Correlation Coefficient analysis with two tailed significant tests was used. Pearson correlation was used to determine whether there is a significance relationship in the two variables and it varies from -1 to +1, with 0 meaning no relationship and 1 meaning there is strong relationship.

Findings And Discussion

In table1 below, majority of people in the restaurants were female having 62.9% of the total respondents. Male respondents are 37.1% of the total respondents. Findings on gender were supported by Chiu and Hsieh (2016) whose study on restaurants supply chain practices on firm performance found that 50.8% of the respondents who are in the managerial position were female while 49.2% were male. The study's treatment of the sex as a control variable served only to show the percentage of male respondents to female respondents who participated in the study. The reason for these results of gender inequity may be due to the mentality that the restaurants works are mostly done by women more than men.

Table 30: Characteristics of respondents (n = 70)

Sex	Frequency	Percent
Male	26	37.1
Female	44	62.9

Level of education

Category	Frequency	Percent
None	1	1.4
Primary	10	14.3
Secondary	23	32.9
College	36	51.4

Working experience

Age	Frequenc y	Percent
0-5	41	58.6
6-10	6	8.6

11-15	15	21.4
16 Years and above	8	11.4
Age group	Frequency	Percent
18-25	14	20.0
26-35	42	60.0
36-45	11	15.7
46-55	3	4.3

Source: Field Data (2022)

Findings portrayed in the below table 1above showed that, majority of respondents had college education and only 32.9% had secondary education and 14.3% had primary education and only 1.4% of respondents had not gone to school. This implied that majority of people working in small and medium restaurants have college education in which most of them are degree and diploma holders who are employed in restaurants industry which seems to employ majority of graduates.

The findings from the field indicated that the 58.6% of the respondents have 0-5 years' experience, 8.6% have experience of between 6-10 years, 21.4% of the respondents have experience of 11-15 years and 11.4% have experience of 16 years and above. This indicates that there are people who have experience with this sector since they have been working for many years and others are trying to do better in order for them to achieve and have the experience needed in the market.

In table 1 above, findings revealed that that 20.0% were aged from 18 to 25 years, 60.0% of respondents were aged from 26 to 35 years, 15.7.2% were from 36 to 45 years, 4.3% were from 46 to 55 years. As per World Bank (1985), people categorized according to age groups such as 0 to 14 years, are termed as children who are under parents' care, 15 to 25 years are youths who are supposed to be at school and who start participating in various economic activities, 26 to 35

years are youths who are considered to be employed whether in government, private companies and/or self-employed 36 to 45 years are adults, 46 to 55 years are aged adults who are considered to be in retiring age and are not so productive, above 55 years of age are people who have retired and they are considered to be non-productive any more. The findings signify that, people aged from 26 to 35 are those who manage the restaurants. People at these ages are believed to have the capability, experienced and very keen in decision making which enhance production and productivity in small and medium restaurants. This information is supported by the study carried out by Chiu and Hsieh (2016) which showed that, most of the respondents (31.5%) were in the 31 to 40 years age group, again Doğana *et al*, 2015 who studied on waste management practices in restaurants had 44.6% of their respondents to be of 31 to 40 years of age.

Contribution of food waste management methods on green logistics practices

This section presents the findings and the discussion of the third objective which intended to determine the impact of food waste management methods on green logistics practices. Data were analyzed using regression analysis. Before regression analysis was performed to see whether variables they are significantly associated or not, Table 2 presents summary of findings for relationship between food waste management methods and green logistics practices.

Table 2: Contribution of food waste management methods on green logistics practices

		Coefficients				
Variables	Attributes	Unstandardized		Standardized	t	Sign.
		Coefficients		Coefficients		
		B	Standard Error	Beta		
	(Constant)	1.165	0.258		4.521	0.000
Food waste	Reuse and	0.2120	0.1881	0.271	1.127	0.000

management	reduce					
methods	Animal	0.1264	0.0369	-0.099	3.420	0.000
	feeding					
	Landfilling	1.5261	0.3531	0.543	4.322	0.013
	and open					
	burning					

Source: Field Data, (2022)

Referring the table 2 above, with investigating items: reuse and reduce, recycling, open burning, land filling and animal feeding were paired with food waste management in restaurant as the dependent variable. Results revealed that, there is a significant relationship for reuse and reduce and green logistics practices in restaurants, P-value 0.000 less than 95% confidence interval and a coefficient of 0.2120, which means one unit increase in reuse and reduce result to 0.2120 units increase in green logistics practices. This indicating that, small and medium restaurants only buy necessary quantity of products for their daily operations this means that they plan their purchases and they do not overstock their requirement /ingredients especially those which have shorter life span like vegetables. These results mean that small and medium restaurants in Dodoma do purchase and use reusable products in their daily operations. Examples of products they are using are cleaning equipment's, kitchen utensils such as packaging containers and cook wares, plates spoons and others.

In terms of recycling results outputs show that, there is significant relationship with food waste management in the restaurants, P- value 0.002 greater than 0.05 at 95% confidence interval and a coefficient of 0.1122, which means one unit increase in recycling result to 0.1122 units increase in food waste management options which indicates that, animal feeding is the best way of managing food wastes due to the fact that it is difficult to recycle food waste as they get spoiled easily if not treated right away and generates bad smell and bacteria.

Open burning and landfilling are the other variable items which was noted to have significant relationship with green logistics practice, P- value 0.013 greater than 0.05 at 95% confidence

interval and a coefficient of 0.1264, which means one unit increase in Open burning and landfilling result to 0.1264 units increase in green logistics practices. Results output reveal that the method results into environmental pollution which is harmful to the health of the residents. The results show that sufficient number of respondents had a positive reflection in these waste management methods since in these methods landfilling in particular, wastes are fully inserted under the ground and well surfaced and no any kind of environmental pollution to the surrounding environment.

The other pair of variables was animal feeding with food waste management in restaurants. The results have the significant relationship with P- value 0.000 less than 0.05 at 95% confidence interval, indicates that the method is proper to achieve the desired objective, since the food wastes are directly taken by animal keepers for feeding their animals, hence they are completely absent in the environment. As noted from Mr.Uchebe (Not a real name), who said, ‘....*Tuna kontena kubwa hapo nje kwa ajili ya kuifadhi mabaki ya chakula, likijaa tunawasiliana na wafugaji wa nguruwe waje kuchukua ili kulisha mifugo yao*’.....

This indicates that food wastes are properly managed by the restaurants and this reduces pollution to the environment. Also, animal feeding is the best way of managing food wastes due to the fact that it is difficult to recycle food waste and they get spoiled easily if not treated right away they generates bad smell and bacteria.

Conclusion And Recommendations

Conclusion

The researcher concluded that there is a need for small and medium restaurants in Dodoma to focus in accurate demand forecasting and stock inventories as a major strategies of food waste mitigation in small and medium restaurants in Dodoma city. More so, majority of restaurants that are aware of food waste existence, however majority of them did not keep records on amount of food wasted which could help to determine the magnitude of food waste and come up with effective food waste reduction strategies in restaurants environment.

Recommendations

Restaurants owners should think of designing anti-waste application which will help them to offer their unsold food to consumers at reduced price. Restaurants owner should seek more knowledge concerning food handling practices in their restaurants which will help them to be able to minimize the problem of food waste more effectively and efficiently. Also, they will be able to educate their employees as well as customers on responsible food consumption patterns for proper food waste minimization practices which will lead to saving of costs and boosting the profit margin, and more so, the achievement of environmental sustainability in the near future.

Again, the restaurants should adopt and implement solid waste management practices; that include waste collection and depositing, waste reduction, recycling and reuse and waste composting.

Area for further studies

In this study, the researcher attempted to assess the impact of food waste minimization options towards green logistics practices among small and medium restaurants in Dodoma city. However, the conclusion was derived based on data collected from 80 sampled respondents in the area of study. The findings might be biased in nature since Dodoma city is one of the areas where restaurant industry is booming in Tanzania and there could other challenges associated to green logistics practices. Further studies may take into account in-depth investigation on restaurants operations especially on how consumer/customer behavior affects the food waste minimization in restaurants.

Also, the study made an assessment on the problem and drew conclusion based on three variables which included food waste management where the focus was on food waste prevention strategies, food waste reduction strategies and food waste management methods.

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Effect of Mobile Money Services on the Income-Earning of Women Second-hand Cloth Entrepreneurs in Dodoma City

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Abstract

The diffusion of mobile money technology has changed the financial landscape across countries in Sub-Saharan Africa, including Tanzania. Women entrepreneurs would use mobile money services to improve business performance by increasing sales, market share, and profitability. The study adopted a capability approach to investigate the effect of mobile money services on the income-earning of women's second-hand cloth entrepreneurs in Dodoma City. Triangulation mixed method was used to collect both qualitative and quantitative data from Sabasaba and Machinga complexes in Dodoma City. A total of 50 women second-hand clothes entrepreneurs were surveyed and 15 key informants were interviewed. The study used SPSS as an analytical tool to analyze quantitatively both descriptive and inferential data on the extent of mobile money services use in the second-hand clothes business and the effect of mobile money services on the income-earning of women second-hand cloth entrepreneurs. Qualitative data were analyzed by using content analysis on challenges women second-hand cloth entrepreneurs face when using mobile money services. The result shows that the majority of women second-hand cloth entrepreneurs use Vodacom mobile money services followed by Tigo mobile money services. Further also revealed a significant relationship between mobile money saving and mobile money borrowing, mobile money receiving, and the income-earning of second-hand cloth women entrepreneurs. The study findings revealed that the coping strategies for solving the challenges of using mobile money services include a reduction of transaction costs and an increase in digital knowledge for users. The study recommends that the Bank of Tanzania (BOT), Tanzania Communication Regulatory Authority (TCRA), and mobile money companies should collaborate

with small and medium entrepreneurs to solve challenges that hinder business efforts of increasing income by using mobile money services.

Keywords: Mobile money services, women entrepreneurs, second-hand clothes business, mobile money transactions

Introduction

Technology has created opportunities for the socio and economic development of communities in developing countries in several ways (Msoffe & Lwoga, 2019; Frank & Robertson, 2019). The diffusion of mobile money technology has changed the financial landscape across countries in sub-Saharan Africa, including Tanzania (GSMA 2022). Mobile money is a service that enables users to access financial services over mobile devices by dialing Unstructured Supplementary Service Data (USSD) codes (Masocha & Dzomonda, 2018). It offers financial services such as deposits, withdrawals, sending and receiving transfers, purchasing bundles, and paying bills (Kim 2021). In Tanzania, mobile money is provided by network providers such as Vodacom, Tigo, Airtel, etc., and has reached more than 35 million people across the country (TCRA 2021). The service is reported to bridge the financial exclusion gap for the unbanked and foster the modernization of the informal economy (GSMA, 2022; Pansera & Owen, 2019), thus contributing to the attainment of the Sustainable Development Goals (SDGs) (Klapper, El-Zoghbi, & Hess, 2016). It is a more efficient method of financial transaction because it requires less time and procedures to complete the service at its own safer pace, which means storing money and saving. This is consistent with (Kim, 2021) who argued the unique benefit of mobile money is due to its greater accessibility, ability to readily reach vast populations, wireless connectivity, and extensive network of agents.

Research shows that mobile money services have a positive impact on financial inclusion and the business performance of women entrepreneurs (Kim, 2021). Mararo & Ngahu (2017), pointed out that women entrepreneurs use mobile money services to improve business performance by increasing sales, market share, and profitability. Performance is improved due to financial functionalities because of the affordability, availability, and convenience nature of mobile money services to simplify entrepreneurial activities (Kim, 2021). This study regards mobile money

services in terms of their key functionalities such as mobile money payments, receipts, lending, borrowing, savings, and transfer among women second-hand cloth entrepreneurs, all for implicating income earning in their business processes through digital technology. Women entrepreneurs can use mobile money to streamline their business activities to save time and costs, transact with suppliers, buy or pay for goods or receive payment. Given such flexibility, transactions can be performed anywhere, anytime, without leaving their business (Kirui & Onyuma, 2015). Second-hand women entrepreneurs deal with recycling economics by reselling used clothes. Considering the nature of this business, it is not a native business; mobile money services would serve as valuable services to facilitate transactions, including importation and even receiving payment from customers.

Research problem

While research reported varied opportunities for mobile money services in the business performance of women entrepreneurs (GSMA2022), the uptake of mobile money services among women in Tanzania is still low. Transaction cost, lack of digital skills, lack of information, network connectivity, and low social-economic status are among the reasons for the low uptake (Chakombo et al., 2018; GSMA, 2022). These would influence entrepreneurial activities and hence jeopardize the income earning of women. There are several studies on the use of mobile money on women entrepreneurs (Masocha & Dzomonda, 2018; Kwabi & Mboya, 2019; Kam Soon 2021). Nevertheless, research devoted to studying the effect of mobile money services on the income of second-hand women entrepreneurs by using a capability approach to understand is scarce (Donovan, 2012; Adaba, Ayoung, & Pamela, 2019; Msoffe & Lwoga, 2019). This research employed the capability approach (Sen, 1993) as a lens to understand the effect of mobile money services on the income earning of women second-hand cloth entrepreneurs in Dodoma, Tanzania. The capability approach is relevant in this research as it fits well to research projects related to ICT4D and innovation such as mobile money (Adaba, Ayoung, & Pamela, 2019; Kleine, 2010; Bass, Nicholson, & Subhranian, 2013; Msoffe & Lwoga, 2019). In addition, the research focuses on understanding the means used by second-hand cloth women entrepreneurs who utilized the opportunities offered by mobile money to facilitate income earning. In this study income earning can be understood as an increase in sales, improve logistics, business growth, and profitability as well as raising the standard of life. Our motive is

to provide a clear analysis and understanding of the effect of this remarkable contemporary financial services innovation on the income earning of women second-hand cloth entrepreneurs in Dodoma city

Research Questions

This research sought to address the following research questions.

- i. What is the extent of mobile money use on entrepreneurship among women second-hand-cloth entrepreneurs for income earning in Dodoma city?
- ii. What capability factors (mobile money services) influence the income of women second-hand cloth entrepreneurs in Dodoma city?
- iii. What are strategies for mitigating mobile money challenges for income earning among women second-hand-cloth entrepreneurs and regulators in Dodoma City?

This research added knowledge to the body of sparse literature about the implications of mobile money transaction costs on entrepreneurship for the financial empowerment of small enterprises. The research also contributed to knowledge on mobile money transaction costs that is friendly to low-income earners while promoting financial empowerment

Literature

Theoretical Review

The study adopted a capability approach study to gain an understanding of factors that can facilitate entrepreneurs' use of mobile money in increasing their income. The approach was pioneered by an Economist philosopher Amartya Sen in 1993. The approach is used in a wide range of fields, most prominently in welfare economics among others. The core characteristics of the approach are the focus on what people can do and to be based on their capabilities. It posits that policies should focus on what people can do and should remove obstacles. This is because between the means and the ends only the ends of what can be achieved are more important and the means are instrumental in achieving improved well-being. Thus, the ends of well-being should be conceptualized in terms of people's capabilities to function, meaning having effective opportunities to undertake actions and activities they want to engage in to be who they want to

be. Some of these capabilities consist of financial resources and economic production (Robeyns, 2005).

The Capability Approach is applicable in this proposed study since the study is studying the effects of Mobile Money services on the income of women second-hand entrepreneurs. The study assumes that mobile money services are used as a means to enable women to become what they are by improving their income and well-being in general through digital technology. The capabilities in this study were the use of mobile money services to access financial resources and actively engage in economic production (entrepreneurship) to earn income to improve the well-being of women entrepreneurs. As the approach emphasizes the policy implication of removing obstacles toward improving well-being; it is believed that the findings of this study will highlight challenges that entrepreneurs face as they use mobile money services to improve their well-being. Such findings can be taken on board for improving technological innovation/use policies.

Empirical Review

In the contemporary global economy, the lives of people have been transformed by the development of Information and Communication Technology (ICT), mobile money technology inclusive, in entrepreneurship (Aron, 2018). Although there are several empirical studies on the economy of mobile money and its use, the implication of mobile money use to some of the marginalized groups, particularly in entrepreneurship is not well established (Aron, 2018). Globally, the GSMA report of 2022 indicated a general increase in mobile money use in terms of volume, value, and merchant activity (Andersson-Manjang, S. K., & Naghavi, 2021). The report indicated the growth of mobile money merchant payments by 43 percent in 2020 compared to 28 percent in 2018, hence over \$2.3 billion in transactions per month in 2020. It is also pointed out by Bayar et al. (2021) that in European Countries, mobile phone technologies are preferably used by individuals and groups regardless of their gender, age, and social isolation and they have become useful in financial empowerment. Countries like Hungary, Latvia, Lithuania, Poland, and Slovenia, where mobile money was found to have a significant positive influence through financial inclusion and empowerment (Bayar et al., 2021) implying a positive influence of mobile money use on income.

In developing countries, the use of mobile money services including in entrepreneurship is considered to be more suitable since the use of formal banks involves traveling a significant distance and requires literacy, documentation, and high transaction costs (Poiret, 2016; Mustafa et al., 2019). It is reported by GSMA, (2022) that among the many emerging technologies, mobile money is one of the most popular and extensively adopted by many developing countries in Africa inclusive. Several studies reveal the successful use of mobile money in entrepreneurship to the general population of Africa and women in particular. For example, in Pakistan, women entrepreneurs despite having low education, limited mobility, and overwhelming domestic responsibilities; have used mobile money to set up successful businesses and make multiple fixed payments (Mustapha et al., 2019). In rural parts of Africa, the majority of people agree that mobile money is a replacement for banking transactions as it is cost-effective and a useful means of financial management (Akinyemi & Mushunje, 2020). This implies that it is more acceptable even on entrepreneurship grounds as it can facilitate more income.

Concerning East Africa, examples drawn from Kenya and Uganda revealed that the use of mobile money in entrepreneurship reported by Akinyemi and Mushunje (2020) that the adoption of mobile money use is positively associated with entrepreneurship in general. It is also significantly positively associated with entrepreneurship for women and rural residents. Likewise, Kim (2021) observed that in Nairobi, women had become able to access financial services much more freely than in the past due to mobile money which partly contributed to their financial empowerment.

The usage of mobile money services in Tanzania has contributed to business growth among Small and Medium Enterprises (SMEs) in Kinondoni – Dar es Salaam, by speeding up transaction processes (Chale & Mbamba, 2015). Concerning Dodoma, the capital city of Tanzania, the majority of SMEs have realized the importance of using mobile financial services in their daily services due to their easy accessibility and less expense compared to bank services (Majani, 2020). Thus, the use of mobile money is highly associated with higher probabilities of entrepreneurship in Tanzania (Koomson, 2021) whereas Dodoma is inclusive.

Generally, the empirical literature review has indicated that studies on the importance of mobile money technology on business growth, financial inclusion, and empowerment have been extensively conducted in different parts of the world. Moreover, studies have been conducted to relate mobile money use and entrepreneurship growth. However, studies that specifically focused on the implications of mobile money services to the income of women who are second-hand cloth entrepreneurs in developing countries, Tanzania and Dodoma City in specific, have received relatively limited attention. This study is geared towards bridging that knowledge gap.

Conceptual framework

The conceptual framework for this study was built for the theoretical literature review (The Capability Approach) and the empirical literature review. Theoretically, the independent variable is the capability translated as mobile phone services in this study. Accordingly, mobile money services are adopted as a means/capability by second-hand cloth women entrepreneurs to increase their income and improve their well-being (Robeyns, 2005). Such services are reflected in empirical studies to include mobile money payments, receiving and sending money, borrowing, transferring as well as saving money (Kim 2021). As for the case of the depending on whether it is beneficial to them and it is easy to use. Empirically, the dependent variable, this study assumes that the end desire or the outcome of women second-hand cloth entrepreneurs is to attain improved well-being translated as income by making use of mobile money services. The empirical literature has revealed that the use of mobile money stands a greater chance to lead to financial empowerment such as increasing the income of entrepreneurs in different parts of the World and East Africa in particular (Koomson, 2022). Therefore, there is a direct relationship between the use of mobile money services and entrepreneurs' income. However, there can be other intervening factors that can influence the income of entrepreneurs such as government policies and regulations, inflation rates as well as interest rates.

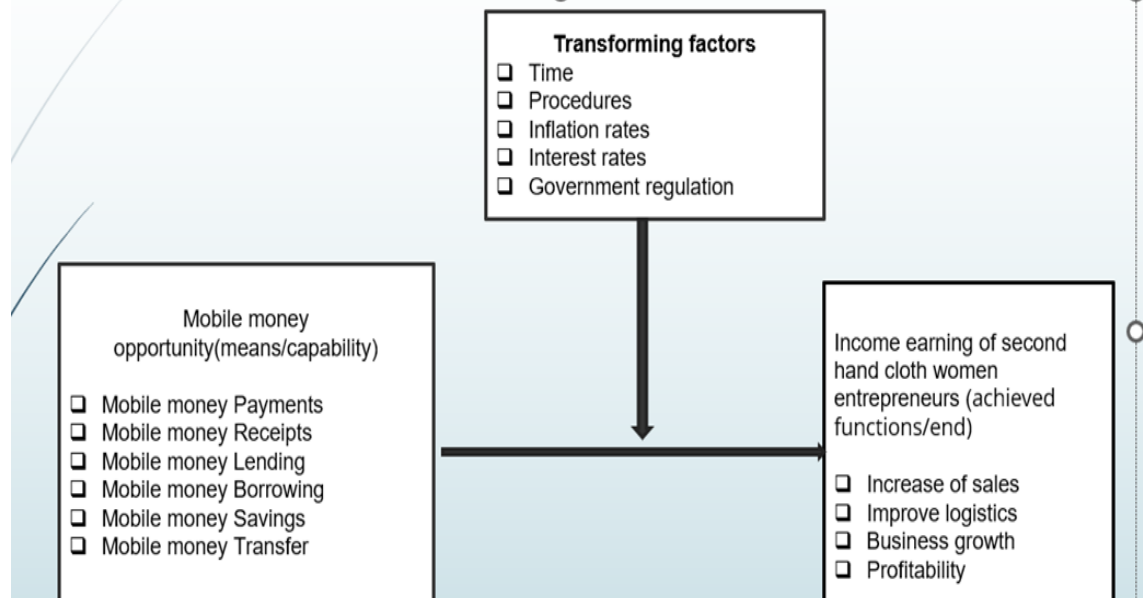


Figure 1: conceptual framework constructed by using different sources: (Capability Approach by Sen in 1993; cited in Robeyns, 2005; and empirical literature Review Kim, 2021; Koomson, 2022).

Method

Study area

Mobile money has emerged as a promising tool in business, social and economic development. Considering this diffusion, mobile money services would potentially address the financial exclusion rate reported to increase in Dodoma (Finscope, 2017). This financial exclusion rate may negatively affect income earnings for many people including women's second-hand cloth entrepreneurs in Dodoma. This has made Dodoma city a relevant location for this research to investigate the effect of mobile money services on the income earning of women's second-hand cloth entrepreneurs in Dodoma City. Thus, the research would be able to understand how mobile money services affect the income earning of women second-hand cloth entrepreneurs in Dodoma. Moreover, the study location is relevant since it serves as a new capital city of the country where the government invests in most of the projects and locates central government offices such as Ministries. This makes Dodoma become a vibrant and growing city with a significant influx of entrepreneurs from different parts of the country who are interested in becoming entrepreneurs. Also, about five (5) higher learning institutions are located at the heart

of the city, hosting most graduates who opt to engage in small business entrepreneurship while seeking employment opportunities.

Research design

Triangulation mixed research design was used to address the effect of mobile money services on the income earning of women second-hand clothes entrepreneurs in Dodoma. A concurrent research design was used, and it is suitable to facilitate the collection of both qualitative and quantitative data at the same time. The research was selected to collect qualitative and quantitative data to bring together the strengths of the two forms of data to ensure consistency, validity, and trustworthiness of the research. This research survey was used to assess the capability approach that regards mobile money services as a means or capability that would influence income earning as an outcome or achieved functions in the presence of conversion factors like government levy. On the other hand, qualitative data were collected by using the interview to explore strategies employed to mitigate challenges on income earning concerning mobile money services among women second-hand-cloth entrepreneurs and regulators in Dodoma.

Sampling procedures

Survey method employed 50 women entrepreneurs who engage in second-hand cloth entrepreneurship in Sabasab and Machinga complex Markets in Dodoma City. These markets were selected based on their popularity in selling second-hand cloth located at the heart of the city. The sample size is computed through the Yamane formula out of 75 total populations of women second-hand cloth entrepreneurs in the two markets. Simple random sampling techniques were used to select women entrepreneurs who engage in second-hand-cloth entrepreneurs at their business points. Since every woman entrepreneur has an equal chance to participate in the study, the researcher visited women entrepreneurs at their business points while picking them randomly for a survey.

Data collection

Qualitative data was collected by using interviews to explore strategies employed to mitigate challenges on income earning concerning mobile money services among women second-hand-cloth entrepreneurs and regulators in Dodoma. On the other hand, quantitative data were collected by using surveys to assess the extent of mobile money services uses among women second-hand cloth entrepreneurs in Dodoma as well as factors affecting the use of mobile money services on the income earned by this user group. About 15 key informants were interviewed to understand how the mobile money service transaction cost affects business operations among women second-hand-cloth entrepreneurs, and examine the coping strategies put forward to mitigate the challenge of the mobile money services transaction cost among women second-hand-cloth entrepreneurs. Key informants for interviews included leaders of the women second-hand-cloth entrepreneurs, mobile money agents, and government regulators Tanzania Revenue Authority (TRA) and Tanzania Communication Regulatory Authority (TCRA) were selected based on their leadership position and or experience. The study considers TRA officials as more knowledgeable in working with the government in revenue collections thus understanding challenges of the mobile money transaction costs and therefore can suggest strategies to mitigate the challenges. TCRA officials are regarded as key informants since they are the main regulators of digital communication across the entire country, thus are more knowledgeable on digital transactions matters. Also, mobile money agents are regarded as more experienced in working with mobile money transactions and thus understand citizens' complaints regarding mobile money transaction services hence will be in a position to offer alternative suggestions.

Data analysis

Qualitative data was analyzed using content analysis. Data regarding strategies employed to mitigate challenges on income earning concerning mobile money services among women second-hand-clothes entrepreneurs and regulators in Dodoma. Data recorded during the interview were transcribed then after generating meaning through the identification of codes and then classifies, themes, and patterns for analysis. Regarding quantitative data Statistical Package for Social Science (SPSS) version 23, is used as analytical software to analyze the data. Descriptive statistics were used to analyze data on the extent of usage of mobile money services among women second-hand clothes entrepreneurs, such that means, standard deviation,

percentages, and frequencies were established, and then data were presented in form of tables and figures. To assess factors affecting the use of mobile money services on the income earned among women second-hand clothes entrepreneurs, a multivariate linear regression model was adopted because income earning can be influenced positively or negatively by the study variable. The model was presented in the equation below:

$$Y = \beta_0 + \beta_1 \text{MMp} + \beta_2 \text{MMr} + \beta_3 \text{MMl} + \beta_4 \text{MMb} + \beta_5 \text{MMs} + \beta_6 \text{MMt} + \beta_7 \text{GR} + \beta_8 \text{PT} + \beta_9 \text{IF} + \epsilon_i \dots$$

Where by: Y = income earning, MMp=Mobile money payment, MMr =Mobile money receipts, MMl= mobile money lending, MMb= mobile money borrowing, MMs =mobile money savings, MMt = mobile money transfer, GR= Government regulation, PT=Procedure and time, IF=Inflation, β_0 = coefficients estimated in the model

Results and Discussion

This section presents the findings and discussions that address the study research questions which include: What is the extent of mobile money use on entrepreneurship among women second-hand-cloth entrepreneurs for income-earning in Dodoma city? What capability factors (mobile money services) influence the income of women second-hand cloth entrepreneurs in Dodoma city? And what are the strategies for mitigating mobile money challenges for income earning among women second-hand-cloth entrepreneurs and regulators in Dodoma City? This section begins by presenting the demographic profile of respondents and thereafter the findings and the discussion of the research questions

Demographic profile of women second-hand cloth entrepreneurs and business location

Findings in Table 1 indicate that the majority of surveyed women second-hand clothes entrepreneurs were aged between 39 to 48 years equal to 37% followed by 29-38 years equal to 33%. This age category translates that the majority of women second-hand clothes entrepreneurs are an economically active group, settled with their families, and have responsibilities that trigger their active engagement in income-earning entrepreneurship activities to meet family needs. Education-wise, the majority of respondents had primary (48%) and secondary (48%) education levels while only a few (4%) had a college education. The study was conducted in Dodoma City in which the majority of women entrepreneurs who engaged in a survey were 58%

from the Machinga complex and 42% from the Sabasaba market. The high number of women second-hand clothes entrepreneurs at the Machinga complex is attributed to government relocation and re-arranging of small entrepreneurs from different parts of Dodoma city to the Machinga complex.

Regarding experience, the majority (70%) of second-hand cloth women entrepreneurs had experience of up to five years while few (30%) had experience up to 10 years in selling second-hand clothes.

Table 1: Demographic profile of women second-hand cloth entrepreneurs

Variable		Frequency	Percent
Age	18-28	12	24
	29-38	16	32
	39-48	19	38
	49-58	3	6
Education	Primary	24	48
	Secondary	24	48
	College	3	4
Location	Machinga complex	29	58
		21	42
Experience	Sabasaba		
	0-5	35	70
	6-10	15	30
Mobile money company	Tigo	29	31.5
	Vodacom	39	42.4
	Airtel	15	16
	Halotel	9	9.8

Source: Field data, 2022

The extent of mobile money uses in entrepreneurship among women second-hand-cloth entrepreneurs for income earning.

This sub-section presents the findings and the discussion of the first research question on the extent of mobile money use on entrepreneurship among women second-hand-cloth entrepreneurs for income-earning as follows;

The use of mobile money services by women second-hand cloth entrepreneurs in business

The respondents were first asked to identify the mobile money companies that they used most. Findings in Table 2 indicate that Vodacom M-pesa was the leading mobile money company registered by the majority of women second-hand clothes entrepreneurs 42.4%, followed by Tigo. This finding implies that Vodacom network coverage is more spread across the country compared to other networks where one can access mobile money services from the nearest agents to attract more entrepreneurs to use it since it can promote their business and their income. Thus, the majority of women's second-hand clothes can easily access Vodacom Mobile Money Company compared to other mobile money companies in Dodoma City. Similar results were reported by Jessica (2015) that in Kenya, M-pesa is a visible brand throughout Kenya from rural areas to urban.

Table 2: Choice of a mobile company

Variable		Frequency	Percent
Mobile money company	Tigo	29	31.5
	Vodacom	39	42.4
	Airtel	15	16
	Halotel	9	9.8

Source: Field data, 2022.

Moreover, respondents were also asked how often they used mobile money services for business. The study findings in Figure 1 show that the majority (34%) of women entrepreneurs rarely use mobile money services for operating their business activities in comparison to 30% who use mobile money services weekly as shown in the figure. Such minimal use suggests that using mobile money services for women second-hand clothes entrepreneurs implicate income earning

due to charges that may lower capital invested. A similar finding has been reported by Kapinga et al. (2021) that in Iringa, women entrepreneurs do not make much use of mobile money in business as they are used to the traditional ways of selling business. Likewise, it was established by Mazana and Apolinali (2017) that transaction costs do facilitate the adoption of mobile money in Kariakoo, Dar es Salaam. Likewise, Chakombo et al. (2018) and GSMA (2022) reported that high transaction charges, low social-economic status, and lack of digital skills limit low uptake the uptake of mobile money services among women in Tanzania.

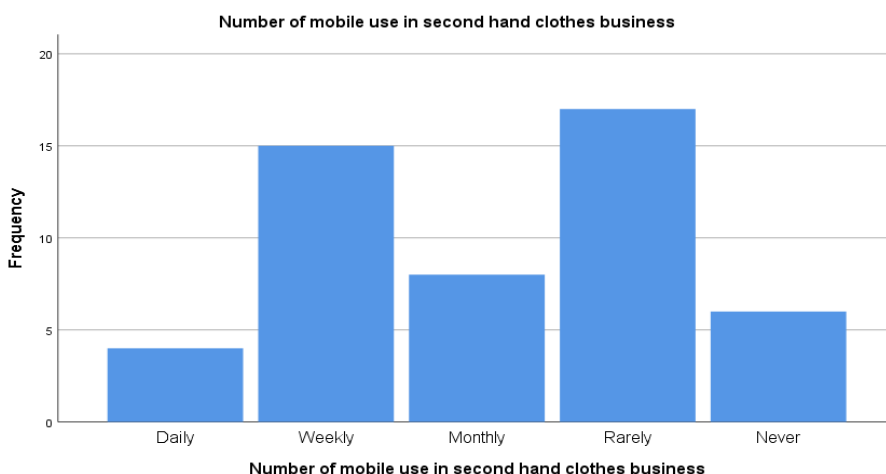


Figure 1: Frequency of mobile money services used

Source: field data 2022

Estimated value of mobile money transactions carried out by women second-hand clothes entrepreneurs in a day/week/month

The study sought to find out about the value of money that women second-hand entrepreneurs carry out in a day/week/month. Findings revealed that 70% of second-hand clothes women entrepreneurs transact below 1,000,000 TZS within a month as indicated in Figure 2. The transaction amount carried out by the majority which is below one million TZS implies a minimal capital of women second-hand cloth entrepreneurs and limited income-earning through mobile money services in their businesses. This finding was supported by key informants who stated that “*transactions performed by the majority of women second-hand clothes are very small due to low economy, on average majority transact 100000TZS*” (Mobile money agent Machinga

complex, 2022). This finding shows the low economy is the major constraint to women entrepreneurs financing their business (e.g. venture capital), while there are high transaction costs hence undermining their income earning and financial inclusion (Kapinga & montero 2017; Anord, 2020; Kim 2021). A similar finding is also reported by GSMA (2022) that Tanzanians are turning away from the use of mobile money services due to transaction costs.

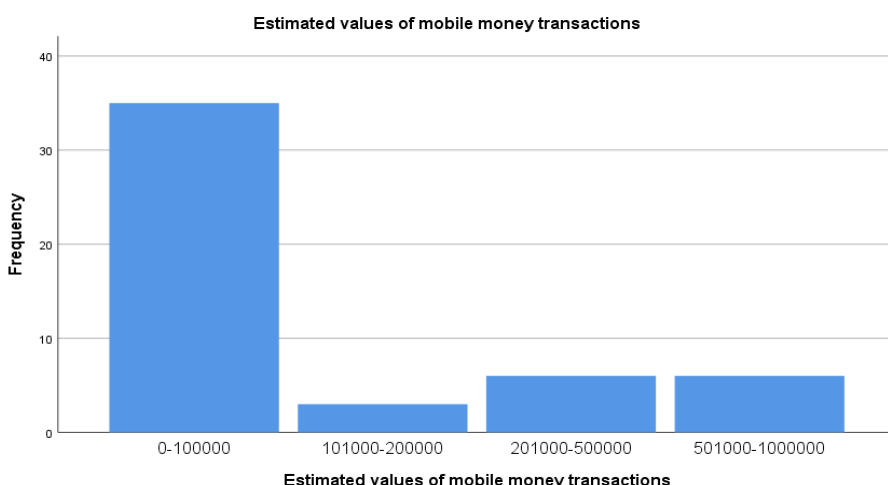


Figure 2: Estimated value of mobile money services used

Capability factors that influence the income of women second-hand cloth entrepreneurs in Dodoma city

This sub-section presents findings and the discussion of research question two which sought to examine the capability factors (mobile money services) that influences the income-earning of women second-hand cloth entrepreneurs in Dodoma city. The findings and their discussion are as follows;

Determinants of the use of mobile money services in second-hand clothes business by women entrepreneurs

The study was also first interested to understand the determinant of using mobile money services to facilitate income-earning among women second-hand cloth entrepreneurs. Indeed, Respondents were asked about the factors that made them adopt the use of mobile phone services. Findings in Table 3 indicate that the major factors that enhance the use of mobile

money services in second-hand clothes business by women entrepreneurs were affordability 82%, accessibility 72%, digital skill, and time-saving count 62%, and security (56%). government regulations (52%), fewer procedures (50%), inflation rate (48%), and popularity (44%).

Findings revealed that affordability is a major concern because it is connected to income-earning goals. This incurs with the statement made by one of the key informants *“Cheap charge a key driver to use mobile money services, this ensures the prosperity of capital invested and hence attracts many users since one would generate more income, and the opposite is true”* (key informant 1, Sabasaba, 2022). This finding implies those women second-hand cloth entrepreneurs use mobile money services more when they are affordable since their income-earning cannot be affected or reduced.

The finding of this study concurs with that of Njele and Phiri (2021) who observed affordability motivates users to adopt mobile money services and contribute towards financial inclusion. It was noted by Similarly, Mlindoko (2022) found out that accessibility has a positive significant association with small business performance in Iringa, Tanzania. Thus, women second-hand cloth entrepreneurs preferably make use of mobile money services depending on the factors that help them increase their business income. Kirui (2016) noted that the majority of small business owners can adopt the use of mobile money services because of their affordability. The concept of affordability reflects what Lema (2017) found out in his study that the perceived cost had a significant relationship with the use of mobile money services. Likewise, (Kim, 2021) noted that greater accessibility of mobile money services readily reaches vast populations due to an extensive network of agents.

Table 3: Determinants of mobile money services use

	N	Percent	Percent in case
Affordability	41	14.0%	82.0%
Accessibility	36	12.3%	72.0%
Security	28	9.6%	56.0%
Popularity	22	7.5%	44.0%

**THIRD BUSINESS AND ECONOMIC DEVELOPMENT CONFERENCE (BEDC, 2022),
HELD ON 15TH -16TH NOVEMBER, 2022 IN DODOMA, TANZANIA**

Save time	31	10.6%	62.0%
Fewer procedures	25	8.5%	50.0%
Skills	31	10.6%	62.0%
Inflation	24	8.2%	48.0%
Government regulations	26	8.9%	52.0%
Total	293	100.0%	586.0%

Source: field data 2022

Mobile money functions that women perform for the second-hand cloth business

Respondents of the study were also asked to identify the mobile money services which they used most. The study findings show that the majority 27% of women second-hand cloth entrepreneurs uses mobile money service for saving their business earnings, followed by borrowing 17.8%, withdrawing 15.6% and transferring 11.7% as illustrated in Table 3 as illustrated in Table 4

Table 4: Mobile money functions performed

	N	Percent	Percent of Cases
Mobile money payment	21	11.9%	49.0%
Mobile money receipt	25	15.9%	53.0%
Mobile money transfer	21	11.7%	42.9%
Mobile money savings	45	27.2%	100.0%
Mobile money borrowing	32	17.8%	65.3%
Mobile money withdraws	28	15.6%	57.1%
Total	180	100.0%	36.3%

Source: Field data, 2022

Findings, as indicated in Table 4, reveal that women second-hand clothes entrepreneurs save on their mobile money account to refrain from charges for using other banking services and thus prefer mobile money saving which is not charged. This further suggests the majority of low-income earners like women second-hand clothes entrepreneurs had no bank account thus mobile money accounts were used as a Bank. A similar finding by Mishra (2014) that mobile money microcredit platform allows people to save their money. This option reflects the need for government policies on mobile money services to ensure financial inclusiveness (such as women who sell second-hand clothes) through the use of mobile money services such as savings. A similar observation was made by GSMA (2022) that the introduction of a new levy to mobile money services may make low-income earners revert to cash and lose wider benefits such as savings. Further Table 3 revealed that mobile money withdraws, payment, and transfer services were minimally used. This again reflects unfavorable transaction costs which made women second-hand cloth entrepreneurs opt for alternative means such use of cash.

Influence of capability factors (mobile money services) on income-earning

The study also intended to find out the influence of mobile money services on the use of mobile money services among women second-hand entrepreneurs in Dodoma City. The income-earning in this study is considered in terms of profit earning, increase in sales, and business growth). Therefore they analysed the influence of the capabilities (mobile money services) which are payment, receipt, withdrawal, transfer, borrowing, and saving on the income-earning measured in terms of profitability, an increase in sales, and business growth. The study used the multiple regression model and the results were presented in Table 5. The results of this study are ideal based on the fitness of the model fitness, such that the R-square was valued and indicated that, the independent variables significantly explain the current dependent variable by 64 percent. This implied that the multiple regression model selected fits to estimate the influence of mobile money services on income earning measured as business growth, profit, and increase in sales.

Table 5: Capability of mobile money services in income earning of second-hand clothes women entrepreneurs

Variable	Unstandardized coefficients		Standardized coefficient		
	coefficient	Std. error	Beta	t-value	Sig.

**THIRD BUSINESS AND ECONOMIC DEVELOPMENT CONFERENCE (BEDC, 2022),
HELD ON 15TH -16TH NOVEMBER, 2022 IN DODOMA, TANZANIA**

(Constant)	2.010	.220		9.115	.000
Mobile money payment	.038	.088	-.121	-.427	.087
Mobile money receipt	.445	.066	-.116	1.678	.050
Mobile money borrowing	.543	.076	.115	2.560	.020
Mobile money saving	.745	.075	-.129	2.920	.000
Mobile money transfer on business growth	.057	.115	-.192	-.495	.323

**Dependent variable = Income earning (increase of sales, business growth & increase of profit);
R²=64%*

Source: Field data, 2022.

The finding in Table 5 shows that mobile money-saving capability positively influenced the income earning of second-hand clothes women entrepreneurs. This was evidenced by the coefficient of saving being .745 meaning that one unit increase in saving could increase income earning of second-hand clothes women entrepreneurs by 7.45% and consequently deepen financial inclusion and alleviate poverty. This finding suggests that higher savings increase the capability of investing enough money in the business in turn income earned from selling second-hand clothes. This finding is consistent with the studies by Mazana and Apolinali (2017), and Kapinga et al. (2021) mobile money services increased income for entrepreneurs who had a connection to customers, but also by reducing travel costs.

Moreover, the result shows mobile money borrowing capability has a direct link with the income earning of women second-hand cloth entrepreneurs. This was indicated by the positive coefficient of mobile money borrowing counted to .543 implying that, a unit increase in borrowing possibly increases the income earning of second-hand clothes women entrepreneurs by 5.43%. This is because of the increased funding of businesses to facilitate the purchase of

bulk second-hand clothes that would meet customers' demand and hence promote business growth, and increase sales and income earned.

On the other hand, mobile money transfers have a negative influence on the income-earning of women second-hand cloth entrepreneurs. This implies transaction costs of money transfers make women opt to use traditional methods of cash. This is reflected in a GSMA (2022) report that high transaction costs make the poor population go back to the use of cash instead of mobile money technology.

Coping strategies to address the challenge of mobile money services among women second-hand-cloth entrepreneurs

This subsection presents the findings of the third research question which sought to examine proposed coping strategies to address the challenge of mobile money services among women second-hand-cloth entrepreneurs. In doing so, the study began by examining the challenges which exist and then coping strategies.

Challenges that women second-cloth entrepreneurs face when using mobile money services

The findings in Table 6 indicate that high transaction cost (90%), reduction of profit (72%), risks (70.2%), and lack of digital skills (60%) were challenges of using mobile money services in income earning among second-hand clothes women entrepreneurs at Machinga complex and Sabasaba market in Dodoma.

Table 6: Challenge of using mobile money services on income earning

Responses	N	Percent	Percent of case
High transaction rates	45	22.1%	90.0%
Reduce profit	36	17.6%	72.0%
Lack of digital skills	30	14.7%	60.0%
Frauds	29	14.2%	58.0%
Risks	35	17.2%	70.0%
Total	204	100.0%	408.0%

Source: field data, 2022

High transaction costs

The interviews with key informants claimed that transaction cost is high, and the bad fact is that a single transaction gets deducted several times to affect their income earnings. One participant had this to say; "One person is charged many times during deposit, transfer, and withdrawal which continues to decrease the value of our capital"

This finding implies that by imposing charges to all the mobile money services, it is obvious that mobile money service users may become victims of multiple charges such as when transferring funds and withdrawing them. In addition, findings revealed that apart from multiple charges the costs are high as indicated by one interviewee who said; "...for example for us small entrepreneurs we have little capital, so when charged for example 5000/- or 3000/- this charge is too large and contributes a lot to the deductions of our income. Also, it is very difficult to recover the amount based on the nature of our business which is small"

The above quotation implies that services offered by mobile money negatively implicate income earning of women second-hand cloth business. For example, a statement that "we have little capital, so when charged for example 5000/- or 3000/- it is a large deduction into our income earning" directly reflects that the charge is high compared to the scale of the second-hand cloth business. This finding is in line with Michani and Muketha (2013) who observed that high costs of mobile money transactions are hindrances to the poor in many ways. This implies that high transaction costs may hinder the efforts of the poor (women second-hand cloth entrepreneurs inclusive) to increase their income because it reduces their profits. This finding is also a

reflection of the finding by GSMA (2022) that the mobile money levy affects the poorest and most vulnerable, and could lead to the reversal of digital and financial gains that Tanzanians have made.

System fraud and insecurity

Another challenge women second-hand cloth entrepreneur's face in using mobile money services is systems fraud and insecurity. This happens when by mistake a customer or an entrepreneur or a customer sends money to the wrong number as reported by one interviewee that "...there are people who are not faithful and they have the service provider numbers, these people withdraw cash that is sent to their accounts by other people by mistake. Unfortunately, the government cannot help on this issue..."

This finding implies that there is a risk of entrepreneurs losing money when they accidentally post the money to the wrong account when using mobile money services; in turn, negatively affects their business income. A similar finding was revealed by Ali et al. (2020) that in Uganda, there are significant challenges in the use of mobile money services such as identity theft, PIN sharing, and agent-driven fraud. Likewise, Kamande et al. (2021) noted a challenge of insecurity to the use of mobile money services particularly for the illiterate. However, the finding contradicts that of Mabile (2018) who observed that mobile money services are associated with high money security. The differences are probably based on use meaning when it is used for saving only the security can be higher than when transferring money.

Lack of digital skills

Moreover, the study found that a lack of digital skills was also a challenge to women second-hand cloth entrepreneurs. The majority did not have enough digital skills in money transferring, ordering, and payment of products. This affected their income since instead of ordering products and sending money to the supplier they had to incur transportation costs for physical visitations to banks and suppliers. A similar observation was reported by GSMA (2020) that only 35% of women use mobile internet (mobile money services inclusive) in Sub-Saharan Africa due to a lack of skills apart from affordability and literacy.

The proposed coping strategies to address the challenge of mobile money services among women second-hand-cloth entrepreneurs

Interviewees were also asked their opinions about the alternative ways that second-hand women entrepreneurs should adopt to avoid mobile money service challenges that affect their income.

Digital knowledge

Most of the interviewees responded that they need to be empowered in terms of digital knowledge which will enable them not to make mistakes and avoid accidents in terms of wrong transactions that affect their income earnings. This is because any remittance performed on mobile money service is charged even though it can be a mistake as one of the interviewees who was a mobile money service provider said; *“Every transaction is charged! It does not matter whether it was conducted by mistake or not, so we need to be careful but we need digital knowledge...”* Another one also responded that *“....in order to avoid errors in transactions that affect the income of women entrepreneurs, mobile money services should provide seminars about transaction services, how to overcome fraud and costs associated with transaction costs....”*

Accordingly, the above quotation implies that it is thus the responsibility of mobile money companies and financial institutions to raise public awareness. This finding is similar to the emphasis that has been pointed out by several scholars such as Kirui (2016), Mazana and Apolinali (2017), and Kapinga et al. (2021) that financial institutions that provide banking services need to increase awareness of using mobile money services to entrepreneurs.

Reduction of transaction costs

When interviewees who are mobile money service providers were asked for their opinions, most of them advised mobile money companies to reduce transaction charges. This is possible if mobile money companies in collaboration with women entrepreneurs should discuss what is to be done. Among the coping strategies to overcome the challenge of mobile money service challenges on the side of the government, some of the interviewees recommended further that the government needs to remove charges on mobile money services since mobile money companies pay taxes to the government. One of the interviewees said that *“...there is no need of having mobile money transaction cost since it is a burden to small entrepreneurs; besides, absence of*

mobile money transaction cost will create a conducive environment to women second-hand entrepreneurs to increase their income"

This finding implies that mobile money transaction cost is interpreted as a burden to small women entrepreneurs since it reduces their likely income. The same observation was put forth by GSMA (2020) that reduced income and loss of investor confidence are among the unintended consequences of the mobile money levy in Tanzania.

Conclusion and recommendations

Conclusion

This research provided insights into the effect of mobile money services on the income earning of second-hand clothes women entrepreneurs in Dodoma city. The finding shows saving, borrowing and receipt were the capability factors to the increase of income-earning to women second-hand cloth entrepreneurs. A unit increase in services affects positively income earnings while a unit increase in mobile money transfer negatively affects income earnings. Money saved, borrowed, and received facilitates funding of their business to meet customer needs and hence increase sales and growth. On the other hand challenges such as high transaction costs, system fraud and insecurities, and lack of digital knowledge affects the use of mobile money services by women entrepreneurs. These challenges require government and private stakeholders' collaboration in developing relevant solutions.

Recommendations

Given the potential of mobile money services to low-income earners like women second-hand clothes entrepreneurs, the study offered the following recommendations:

- i. The study suggests that due to saving, borrowing, and receipt of mobile money services capability demonstrated in the financing, expansion, and increase of sale in second-hand clothes women entrepreneurs; the government is advised to review charges imposed to create enabling women entrepreneurs to utilize more potential opportunity offered by mobile money services.

- ii. Mobile money companies should sensitize the public regarding the benefit of mobile money in business growth and potential fraud on mobile money services to minimize business losses resulting from such fraud.
- iii. The study recommends that the Bank of Tanzania (BOT), Tanzania Communication Regulatory Authority (TCRA), and mobile money companies should incorporate small and medium entrepreneurs to solve challenges that hinder business efforts of increasing income by using mobile money services.

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Effects of Improved Urban Road Network on Financial Performance of Small and Medium Enterprises in Dodoma City, Tanzania

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Abstract

This study assessed the effect of improved urban road network on performance of small and medium enterprises in Dodoma city. Specific objective of the study wereto: determine the influence of improved urban road network on financial performance of SMEs in Dodoma City. The study employed a cross sectional research design where by a sample of 89 SMEs from selected three wards. Data collection methods included questionnaire and documentary review. Qualitative data were analyzed using content analysis while and quantitative data were analyzed using descriptive statistics and multiple regression analysis. The findings revealed that, accessible roads to customers, market accessibility, time management and improved transportation of goods and services were positive and significant related to sales revenue. The study concludes that, improved urban road network contributed to performance of small and medium enterprises in Dodoma city by increase sales volumes, The study recommended that the government should continue to improve urban road networks and start offering basic business and financial management skills as it would enable SMEs to make informed investment decisions as well as enhance their entrepreneurial skills that enable them to recognize and exploit the available business opportunities.

Key words: Urban Road network, financial performance, small and medium enterprise, Dodoma city

Introduction

Globally, well improved urban road network leads to an effective transportation system which is significantly important in sustaining economic growth in contemporary economies. This is due to fact that, improved road network provides linkages between different parts of the country and cities (World Bank, 2017). It links to work, deliver products to market, underpins logistics and supply chain, and support local, national and international trade. An improved urban road network facilitates to improved transportation system which is not only key to national growth but also serves as catalyst for economic development of a country as well as urban areas. Thus, there is a relationship between transportation and productivity (Lu *etal.*, 2009).

The development of urban road infrastructure systems is an integral part of modern city expansion processes. Internationally, roads are dominant transport assets and a valuable infrastructure used on a daily basis by millions of commuters, comprising millions of kilometers across the world (Marovićet *al.*, 2018). According to the World Road Association (2014) the average length of public roads in OECD countries is more than 500,000km and is often the single largest publicly owned national asset. Such infrastructure covers 15-20% of the whole city area and in city centers over 40% of the area (Deluka-Tibljajš, 2013). Therefore, the road infrastructure is unarguably seen as significant and valuable public asset which should be carefully managed during its life cycle.

Infrastructure can be defined and explain as a set of interconnected elements that issue or provide a framework that support the entire structure for development, and it is an essential term for judging a region's or country progress that is around the circle of development (Abdullahi *et al.*, 2015). The term refers to technical structures that guide and support the society, in terms of water supply, electricity grids, bridges, roads, telecommunications, sewers, and also infrastructure is explain as the physical components of interrelated systems that provide products and services essential to sustain, enable, or enhance societal living conditions (Fulmer, 2009).

In Tanzania, the geography, its size, scattered settlement pattern, diversity and dispersion give roads a special role in the integration of the national economy (Starkey & Hine, 2020). Therefore, road transport is the major mode of transportation carrying over 90% of the passengers and over 75% of the freight traffic in Tanzania (URT, 2016). In particular, roads

serve not only major transport demand from sea port to inland on trunk roads but also provide door-to-door services more effectively than any other modes of transport in rural areas where the people need freedom to move (World Bank, 2019).

In urban areas, the quality of road infrastructure directly influences the citizens' quality of life (Hanak *et al.*, 2014), such as the residents' health, safety, economic opportunities, and conditions for work and leisure (Hanak *et al.*, 2014; Marović, 2013). On the other hand, studies reveal that the poor road network as well as infrastructure in urban areas negatively impacts the profitability and performance of SMEs, due to the high cost incurred by SMEs in the self-provision of infrastructure and distribution of finished goods (Marović, 2018; Obokoh & Goldman, 2016).

Small and Medium Enterprises (SMEs) dominate the economic life of most of African least developed countries (LDCs) (Gollin, 2008); they are regarded as the driving force of economic growth and poverty alleviation (UNCTAD, 2015). Mnenwa and Maliti (2008) mentioned small businesses mainly performed by SMEs stand as the number one source of income to low-income countries like Tanzania. According to Tanzania National Baseline Survey for Small, Micro and Medium Enterprises (2012), there are more than 3 million small businesses in Tanzania engaging in trade and service sectors, most of which are informal. It employs about 5,206,168 people; of those, 3,447,469 are owners/spouses; 964,246 are paid workers; 718,663 are relatives and friends; and 79,390 are apprentices. Thus, small businesses are important in the livelihood and economic growth of LDCs' economy (Kumburu *et al.*, 2019).

In order to improve their performances, SMEs need improved road network especially urban roads which facilitates their operations and accessibility of goods and services from timely, whereby this will ensure that the accessed goods are timely reach to market and meet need of customers and that the necessary actions are taken in time (World Bank, 2017). According to TARURA Internal Progressive report (2021) shows that, there is currently an improved urban road network in Dodoma city which covers about 1187.03kms in total. About 158.30Kms are tarmac road equivalent to 13.34% while 320.72Kms are improved rough road (gravel roads) representing 27.02%. However, the remaining portion which covers the distance of 708.01Kms signifying 59.65% is a rough road (Clay road) (TARURA Internal Progressive Report, 2021).

Therefore, there is potentiality of assessing the impact of improved urban road network on SMEs performances in the Cities like Dodoma.

Statement of the Problem

In Tanzania, Small and Medium Enterprises play a significant role in the provision of employment, innovation, payment of tax, reduction of poverty and improving the living standards of people (URT, 2016). Despite the role played by small businesses in economic development, most of them are constrained with some factors (including high operation costs sourced from unimproved infrastructures), which hinder their performance (Mashenene & Kumburu, 2020). The deficiency in infrastructure negatively impacts the profitability and performance of SMEs, due to the high cost incurred by SMEs in the self-provision of infrastructure and distribution of finished goods (Obokoh& Goldman, 2016).

According to statistics at Dodoma city shows that the number of registered SME's is estimated at 22,334 enterprises. (Dodoma city, 2020). Furthermore, the statistics shows that for the past three years 52% of business collapsed this suggested that the SME's within the city do not perform well since much business premises were collapsed.

Previous studies by Mashenene and Rumanyika (2014) SMEs in Tanzania are confronted with a number of constraints which hamper SMEs their potential growth. Among the constraints mentioned by the study include poor infrastructures. However, the study did not discuss which type of infrastructures limit the performance of small businesses. Therefore, this study filled the knowledge gap by assessing effects of improved urban road network on performance of small and medium enterprises in Dodoma city.

Empirical Studies

Khanani *et al.* (2020) asserts that improved urban road network helps much on accessibility to facilities and services. In the urban areas, the road improvements fuels to SMEs performances as well as employment opportunities. Improved road infrastructures have mutual benefit to SMEs since supports movement of people from one location to another as well as reduce the costs for transportation of goods and services.

CIVITAS (2017) reveals that improved urban road network contributes to more accessible, inclusive and liveable cities by improving air quality, optimising road space use and revitalising city centres. Improved cities put in place innovative measures to enhance public transport use as well as support transportation of goods and services. Improved urban road network is a key element of sustainable mobility in cities, and its quality should be maintained in order to keep existing users and attract new ones. Ways of increasing performance of SMEs in urban areas includes; attractiveness of public transport includes improving operational efficiency, harmonizing tariffs and timetables, and improving accessibility and interchange facilities.

A study by Obokoh and Goldman (2016) entails that shortage in infrastructure negatively impacts the profitability and performance of SMEs. The study explained that poor urban road network lead to high cost to be incurred by SMEs in the distribution of finished goods and services. In this regard, the government should embark on road rehabilitation to ease the transportation of goods and services.

A study by Kimani (2012) found that upgrading of urban road network helps to improve transport safety, reduces transport costs, helps on accessibility of product market information, increase flow of customers into business; improve marketing, improved sales volume in businesses. Moreover, the study found that improved urban road network allows my business access products market information that influence the profit margins of businesses. The study further concluded that upgrading urban road network helps much to improve transport safety reducing cost of raw materials, increasing flow of goods from markets, increasing flow of customer into the businesses and increased safety of goods and customers.

Dumas and Jativa (2019) have been noted that there is good progress of urban road network in Tanzania which contributes much on the performances of SMEs. Improved urban road network has helped much on reduction in life satisfaction and decrease in the price of the main products. The authors added that the situation is consistent with predictions obtained from trade models whereby transactions are carried out with lower costs, actually face competition from lower price goods.

Conceptual Framework

It is quite important to be aware on the concept of conceptual framework. According to Shields *et al.* (2013) conceptual framework refers to the way ideas are organized to achieve a research project's purpose. The conceptual framework of this study comprises two key variables thus, independent and dependent variables. The independent variables include accessible roads to customers, market accessibility, time management and improved transportation of goods and services. While dependent variable was performance of SMEs measured by trends of sales revenue.

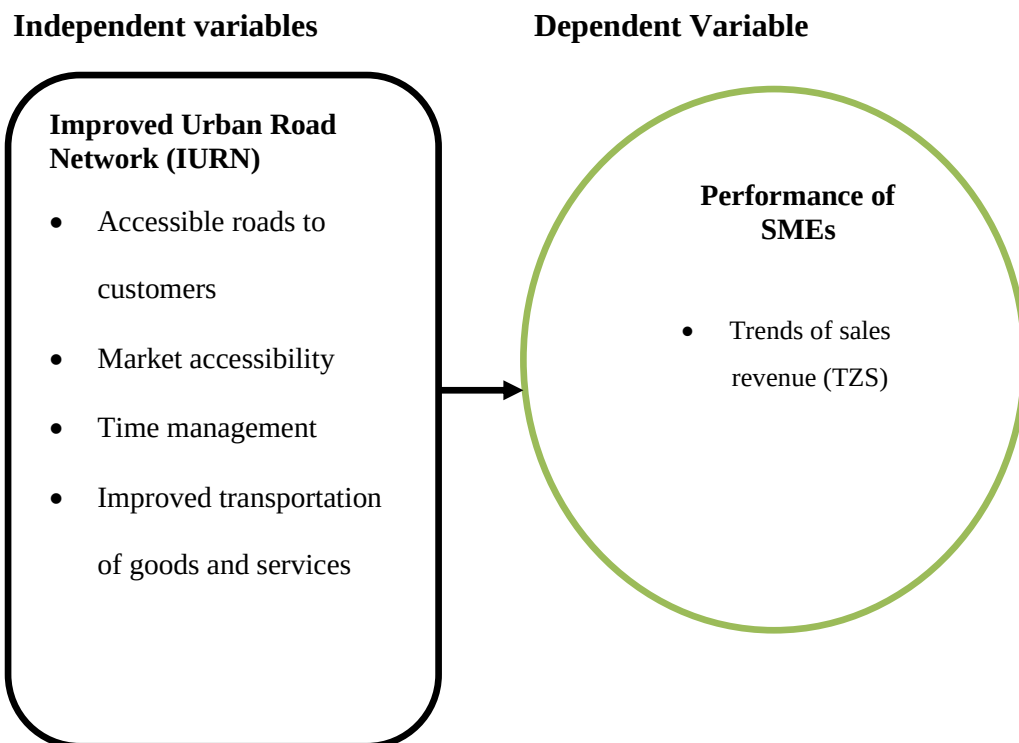


Figure 8: Conceptual Framework

Source: Researcher Own Construction (2022)

Methods

Research Design

The cross-sectional research design used in the study. This research design has been selected because the study intends to collect data and information on improved road network and performances of SMEs in one point of time from the three Wards in Dodoma City (Uhuru, Ipagala, and Kikuyu North). Moreover, the design was most appropriate for descriptive research where data collected in order to answer questions concerning the current status of the subject.

Population of the study

This refers to the collection of elements or objects that possess the information sought by the researcher and about which inferences are to be made (Kabir, 2016). The target population of this study was SMEs dealing with petty business in Dodoma City including Food Vendors and Machingas. It involved staff from Dodoma City, TANROADS, TARURA and WEOs as key informants.

Sampling procedure

The study employed both probability and non-probability sampling techniques in selection of the respondents. In probability sampling, systematic random sampling technique used to select 89 SMEs from a list of 812 SMEs from the three wards.

Sample size

A sample size refers to the total number of sampling units that the researcher includes in the sample. It is recommended that size of the sample should not be vast as the purpose of studying the sample and not the universe would be lost (Malone *et al.*, 2016). In this regard, a mathematical formula suggested by Yamane (1967) used to calculate sample size of the study whereby 95% confidence level and marginal of error (e) =0.1 will be determined;

N

$$n = \frac{1}{1 + N(e)^2}$$

812

$$n = \frac{812}{1 + 812(0.1)^2} = 89.03$$

$$n = 89.03$$

A sample of 89 SMEs in Dodoma city used in the study whereby respondents visited in their respective business locations. To determine sample size in each ward, proportional sampling technique employed. Overall a sample of 89 selected from three wards proportionally as shown in Table 1

Table 1: Proportional sample size determination

Wards	Number of SMEs	Computation	Sample size
Uhuru	341	$341/812 \times 89$	37
Ipagala	280	$280/812 \times 89$	31
Kikuyu	191	$191/812 \times 89$	21
Total	812		89

Data Analysis Technique

To determine the influence of improved urban road network on performance of SMEs in Dodoma Cit. Multiple regression analysis were employed to examine significant relationship between independent and dependent variables. The Multiple regression analysis used because the dependent variables captured and treated as continues variables. The following regression model wereused:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_i \epsilon_i \dots \dots \dots (ii)$$

Where;

Y= Trends of sales revenue (TZS)

α = Constant term

β = Beta coefficient

X_1 = Accessible roads to customers

X_2 = Market accessibility

X_3 = Time management

X_4 = Improved transportation of goods and services

Content analysis was used for analyzing qualitative data. In qualitative data analysis researcher were time to quantify and analyze the presence, meanings and relationships of the words and concepts, such as improved road network and SMEs performances then made inferences about the messages within the texts.

Results and Discussion

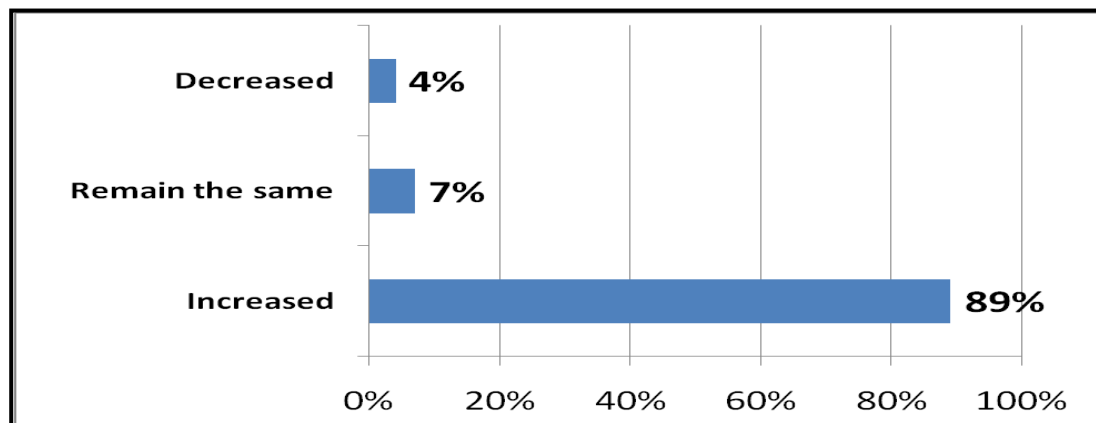
Descriptive Statistics Results

Current Level of SMEs' Sales Volume for SMEs

This section forms the first objective of this study in order to determine current level of SMEs' sales volume for SMEs in Dodoma City. Findings in Figure 1 indicate that, majority (89%) of respondents rated that their current level of sales were increased improved urban road network

Respondents were asked to answer whether the budget allocation have an influence on the implementation of annual procurement plan. Different independent variable was included such as timely budget preparation, specific department and budget control were as the dependent variable is implementation of the annual procurement plan at Air Tanzania Company Limited.

Furthermore, independent variables included in the model were good predictors of implementation performance of annual procurement plan. About 73.8% of variations in implementation performance of annual procurement plan were due to variations in independent variables included in the model. Findings indicated that independent variables included in the



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fic department and budget allocation collectively had a significant influence on implementation performance of the annual procurement.

Source: Field Data (2022)

Furthermore, the study captured the average monthly sales revenue. The findings as shown in Table 4 revealed that the mean monthly sales of SME were TZS 325,000/= per month before improved road network and but after improved road network the mean monthly sales were increase to TZS 705,000 per month.

Table 2: Average monthly sales revenue

Response	Average sales volume (TZS)
Before improved road network	325,000/=
After improved road network	705,000/=

Source: Field Data (2022)

The findings imply that, the current level of SMEs' sales volume for SMEs in Dodoma City was increased after improved road network. This could be attributed by accessible roads to customers, market accessibility, time management and improved transportation of goods and services. Similar findings confirmed during interview by one Key Informants add that:

“...The sales volume of SME would be increased in locations where there are improvements made to urban roads, as this would make it easier for customers to access and purchase their products or services. This would likely benefit all businesses within the location, as increased sales would lead to increased profits....”

These findings supported by Mugo, et al., (2019) found that, infrastructure has a significant positive effect on the growth of SMEs. Furthermore, a lot of studies have examined the effects of infrastructure on the performance of SMEs in various sectors of the economy. (Akinson, 2018) emphasized that basic infrastructure such roads, and transportation is the least requirement for SMEs to flourish, Thus, infrastructural facilities provided by government can promote the growth of SMEs by facilitating the acquisition of all the necessary inputs that assist and promote investment and growth of the SMEs.

Inferential Statistics Results

In this section multiple regression analysis was used to test whether there existed significant relationship between independent variables (accessible roads to customers, market accessibility, time management and improved transportation of goods and services) and dependent variable (Sales volume)

Table 3: Regression Output

Variables	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.
	B	Std. Error	Beta		
(Constant)	1.231	0.548		1.026	0.134
Accessible roads to customers	0.164	0.134	0.158	1.555	0.008
Market accessibility	0.145	0.160	0.118	0.840	0.014
Time management	0.207	0.101	0.133	1.420	0.010
Improved transportation of goods and services	0.110	0.226	0.138	1.703	0.023
$R^2 = 0.637$					
F-value= 84.2					
Dependent Variable: Sales Volume					
Source: Field Data (2022)					

Result in Table 3 revealed that the model's R^2 was 0.637; meaning that the independent variables in the model explained by 63.7% of the variance in the dependent variable. Out of four independent variables (accessible roads to customers, market accessibility, time management and improved transportation of goods and services) against sales volume measured by trends of sales revenue (TZS).

Moreover, the findings in Table 3 revealed that, accessible roads to customers was found positively and significant related to sales revenue (Beta coefficient = 0.164, p-value= 0.008). This implies that, any unit improvement of accessible roads to customers could increase performance of small and medium enterprises in Dodoma city in terms of sales revenue by 16.4%. This findings also supported by Akinyele et al., (2016) found that, accessible roads to customers and SME performance is important not only for the businesses themselves, but also

for the wider economy as a whole. A well-maintained and accessible road network is essential for the efficient operation of businesses. It helps to reduce the cost of goods and services and allows businesses to reach new customers more easily.

Furthermore, the findings in Table 3 revealed that, market accessibility was found positively and significant related to sales revenue (Beta coefficient = 0.145, p-value= 0.014). This implies that, any unit improvement of market accessibility due to improved urban road network could increase performance of small and medium enterprises in Dodoma city in terms of sales revenue by 14.5%. Also during interview with second Key Informants add that:

“...Improved urban road networks can help to improve market access and sales volume for SMEs, also help to reduce transportation costs, making it easier for businesses to get their products and services to market. In addition, can help to reduce traffic congestion and pollution in cities, which can benefit businesses and residents alike...”

The findings supported by study by the World Bank (2020) found that improved urban road networks are essential for market accessibility and sales volume to small and medium enterprises (SMEs). The study found that SMEs located in cities with good urban road networks are more likely to export their products and services than those located in cities with poor road networks. In addition, SMEs that export is also more likely to be larger businesses.

Similarly, the findings in Table 3 revealed that, time management was found positively and significant related to sales revenue (Beta coefficient = 0.207, p-value= 0.010). This implies that, any unit increase of time management due to improved urban road network could increase performance of small and medium enterprises in Dodoma city in terms of sales revenue by 20.7%. Findings in line with Akinyeleet *al.*, (2016) found that, small and medium enterprises could potentially see an increase in performance if there is an improved urban road network that allows for better time management. This could lead to increased productivity and efficiency. Additionally, the decreased congestion and increase in mobility could also lead to an increase in business opportunities.

Additionally, the findings in Table 3 revealed that, improved transportation of goods and services was found positively and significant related to sales revenue (Beta coefficient = 0.110, p-value= 0.023). This implies that, any unit improved\ transportation of goods and services could

increase performance of small and medium enterprises in Dodoma city in terms of sales revenue by 11% due to improved urban road network. During interview with third Key Informant add the following;

“...For small and medium enterprises, an improved urban road network in Dodoma city could provide a more efficient way to transport goods and resources. This would lead to increased production and improved business performance...”

These findings supported by Obokoh& Goldman, (2016) found that, the transportation of goods and services is essential for the performance of small and medium enterprises. An improved urban road network could increase the efficiency of transportation, leading to increased performance of small and medium enterprises in terms of sales volume.

Conclusions, Recommendation and the Area for Further Research

Conclusion

Based on the study findings, it can be concluded that the current level of SMEs' sales volume for SMEs in Dodoma City were increased after improved road network compared to before. Furthermore, the study found that, accessible roads to customers, market accessibility, time management and improved transportation of goods and services were positive and significant related to sales revenue. this indicated that, improved urban road network led SME's to accessible roads to customers, market accessibility, time management and improved transportation of goods and services.

Recommendation

Government should continue to improve urban road networks and start offering basic business and financial management skills as it would enable SMEs to make informed investment decisions as well as enhance their entrepreneurial skills that enable them to recognize and exploit the available business opportunities. Moreover, the central government should develop supportive policies, laws, and regulations that address the SME's specifically for street vending activities used improved urban road network. Will help street vending activities to be the same like other forms of formal business what needed and constructive interventions.

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The Effect of Perceived Bank Charges on Bank Loans on Customers Switching Behaviour in AKIBA Commercial Bank in Dar Es Salaam City, Tanzania

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Abstract

This study was conducted at Akiba Commercial Bank in Dar es Salaam City, Tanzania to determine the effect of perceived bank charges on customers switching behavior. The study used a cross-sectional research design whereby a questionnaire was administered to 100 AKIBA Commercial Bank customers. A cross sectional study was adopted to collect information from 100 customers of the Akiba Commercial Bank PLC in Dar es Salaam City. A binary logistic regression was employed for data analysis whereas the findings analyzed are presented in form of text and tables. The results showed that customer switching behavior is positively and significantly influenced by interest rates and processing costs on loans. In order to promote customer retention and attract new clients, the study recommends to the bank administration to take into account lowering lending interest rates, particularly for price sensitive customers.

Keywords: *Perceived bank charges, bank loans and customer switching behavior*

Introduction

In today's competitive world, customer switching behaviour is becoming more complex due to the fact that consumers have easy access to information about different brands of products.

Satisfying and creating a favourable impression about the product should be the priority of any organization. In view of this therefore, companies are constantly trying to build mutual relationships with their customers through delivering better value products and meeting their promises (Agarwal, 2019).

However, due to increasing number of competitors, emerging new technologies in services and the limitation of existing resources, there is an intense competition in service industries including the banking sector (Serinkan & Kiziloglu, 2015) and banks concern about losing customers to other banks (Lymperopoulos, Chaniotakis, & Soureli, 2013). Customer retention lowers the need for seeking new customers (Zeng *et al.*, 2014).

Both domestic and foreign banks operate in Tanzania's commercial sector, which is highly competitive due to the country's expanding economy. Customers' options are promoted and improved by this rivalry, which also makes it easier for them to switch or transfer from one bank to another in quest of more affordable and user-friendly services. For instance, the National Bank of Commerce Limited Company (NBC Bank LTD) in Tanzania indicated that a rising number of customers are leaving their bank for other financial institutions (Mrungu, 2013). On the other side, figures from the Tanzania Postal Bank (TPB Bank PLC) showed that as of December 31, 2016, it had 1,186,333 customers, up from 755,744 customers in 2014 to 1,186,333 clients as of December 31st, 2017. This 430,589-customer rise shows that clients from other banks had switched to TPB Plc (TPB bank PLC Strategic Plan Office, 2018).

There are limited researches on the variables that influence customers' intentions to move service providers, particularly in the banking industry. Prior research on customer switching in banking services has mostly focused on the causes and occurrences that influence switching behavior as well as the incentives for consumers to transfer (Gerrard & Cunningham, 2019; Manrai&Manrai, 2020). In the banking environment, a holistic picture of these variables that explains their intricate mechanics and how they impact consumer switching intention is absent. As a result, this study used Akiba Commercial Bank PLC in Dar es Salaam City to evaluate perceived factors impacting consumers' switching behavior in Tanzania.

There is currently a lot of rivalry, and today's clients are more sophisticated and have high expectations for financial services (Boateng, 2020). The supply of superb quality service from the perspective of the customers, however, presents one of the biggest challenges facing the banks because customers have high expectations for the quality of service they are expecting from the banks. Additionally, the expense of banking switch-over is harming both current profitability and future revenues (Adekannbi, 2018).

For instance, according to reports, the Akiba Bank PLC's client base dropped from 170,200 in 2018 to 153,800 in 2020 (Akiba commercial Bank Annual report, 2021). This suggests that customer bank switching occurred at Akiba Commercial Bank Plc as a result of the institution's current circumstances.

Despite the efforts made by Akiba Commercial Bank PLC to rise the quality of its products and services, there haven't been many research that have looked at what can lead customers in Tanzania to transfer banks. As an illustration, current research indicates that one of the major factors affecting a customer's choice to switch banks is the bank's service charges.

Other elements include The studies looked at several facets of the issue, including service costs, consumers' lack of financial literacy, subjective norms, service quality, unintentional actions, the safety of funds, the availability of technologies, culture, peer pressure, individual personalities, and lifestyle (Chukwuemeka and Godswill, 2017; Grigoriou et al. 2020; Magasi; 2016 and Rorio, 2019).

Notably, none of the studies appear to have concentrated on aspects like bank loan interest rates, service standards, and transaction costs and how these aspects affect customer switching in the banking sector. In order to establish their association with customer switching behavior in the Akiba Commercial Bank, this study focuses on stated perceived characteristics.

Review of Literature

The effect of perceived bank charge on bank loans on customers switching behavior

According to Vaitone and Skackauskiene (2020), customers frequently switch service providers when service fees are excessive. Price had a substantial impact on customers' intentions to move banks, according to Zakiy (2019). According to the evidence thus far provided by Agarwal (2019), bank fees significantly influenced customers' intentions to switch banks in the Indian banking sector. Price (bank charges) has been proven to positively stimulate customer switching, supporting the impact of perceived control of bank costs on customer switching intentions in commercial banks (Ceesay, 2017).

The effect of perceived service quality on customers switching behavior

Generally speaking, service quality was thought to have a significant impact on how customers switched brands (Suryawardani & Wulandari, 2020). Similar findings were made by Chukwuemeka and Godswill (2017), who highlighted that service quality greatly influences bank clients' intentions to switch providers. According to a case study by Elliott (2019), clients are more likely to select their bank depending on the service that offers the highest value to them.

The effect of convenience of bank on customers switching behavior

Convenience was one of the factors impacting customer switching intentions in India, according to Bansal and Manjit (2019). In light of this, Nimako (2012) emphasized that customers are more likely to give up complaining to bank service providers when the issue is one of judgment related to bank service pricing or charges and convenience in using the services. According to Bugyei (2019), there is a strong correlation between bank location and customer switching behavior in Ghana's banking sector.

Theoretical Framework

The Service Switching Model and planned behavior theory will serve as the foundation for this investigation. Ajzen's hypothesized Theory of Planned Behavior (TPB) (1991). The theory is also a behavioral model that is frequently used. It aids in our comprehension of the mutability of human behavior. The model predicts purposeful behavior because it implies that activity is planned (Ajzen, 1991).

The TPB states that any decision a person makes is influenced by three different sorts of beliefs: control beliefs, normative beliefs, and behavioral beliefs. Behavioral beliefs are ideas about the likely outcomes of a practiced behavior (beliefs about the presence of factors that may enable or obstruct the performance of the behavior). Favorable or unfavorable attitudes toward a particular behavior are typically the result of behavioral beliefs, normative beliefs produce perceived social pressure or subjective norms, and control beliefs cause perceived behavioral control, subjective norm, and perceived control. The stronger the person's intentions to engage in the behavior, the more powerful these effects are.

The theory is pertinent to this investigation because it pertains to the variables covered by it, such as the idea of perceived behavior control, which has been linked to switching costs (Hasbullah *et al.* 2014) and is related to perceived bank charges in our study. Individual attitude and behavior have been linked to service quality as a result (Farah, 2017).

It has to do with the perceived quality of the services in this study. According to Keaveney's proposed Service Switching Model, the Convenience variable is recognized (1995). Evidence from earlier studies showed that convenience-related factors are the main reasons why customers are more willing to switch service providers (WRBR, 2018). The aforementioned instances served to highlight the impact of ease on consumer switching behavior. In order to analyze perceived factors impacting customers' switching behavior in the banking industry, the construct of convenience was combined with TPB.

Methodology

Data

The Akiba Commercial Bank in Dar es Salaam City served as the study's location. This Bank was chosen for the study since it has been stated that Akiba Bank PLC's client base shrank from 170,200 in 2018 to 153,800 in 2020 (Akiba commercial Bank Annual report, 2021). This suggests that customer bank switching occurred at Akiba Commercial Bank Plc as a result of the institution's current circumstances. Cross-sectional research methodology was used in this study. Since data were only collected once, the design was best suited for investigations where

researchers had limited time and resources. 25,000 registered customers who used the products and services of Akiba Commercial Bank in Dar es Salaam city were the study's target group.

For this matter, every participant in the chosen sample should have an equal chance of being selected.

The following formula was used to calculate the sample size of the study:

$$Z^2 * (p) * (1-p)$$

$$c^2$$

Where:

Z = Z value (1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (0.5 used for sample size needed)

c = confidence interval, expressed as decimal = 0.1.

$$n = \frac{Z^2 * 0.5 * (1 - 0.5)}{0.1^2} = 100$$

100 customers of the Akiba Commercial Bank PLC in Dar es Salaam City were thought to be the sample size.

Analytical Model

The study included a variety of data collection techniques, including interviews, questionnaires, and document reviews. To improve the validity and dependability of the data for relevant outcomes, various strategies were applied. Both qualitative and quantitative data were employed. In qualitative data, content analysis was used to quotes the information from AKIBA commercial bank managers. For quantitative data a binary logistic regression was adopted were by customer switching behavior was a ditchotomous variable like it's indicated in the following below econometric equation.

$$(Y-1) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

(Y-1) = Customer switching behavior

β_0 = Constant coefficient

X_1 = Interest rate on loan

X_2 = withdrawal charges

X_3 = Transaction cost

ε = Error estimate

Findings and Discussion

Demographic Information

The characteristics of the respondents were an important part of this study because they have the potential to influence the study's conclusions (Beel *et al.* 2013). The characteristics of the respondents which were included in this study are sex, educational qualification, marital status, occupation and monthly earnings. These characteristics were chosen for this study because they are likely to influence the majority of personal evaluation regarding customers switching behavior (Khuong & Duyen, 2016)

Table 2: Demographic Information

Type of profile	Profile	Frequency	Percent
Sex	Male	65	65
	Female	35	35
Age	18-26 years	28	28
	27-35 years	36	36
	36-45 years	18	18

	Above 56 years	18	18
Education	Primary	12	12
	Secondary education	18	18
	Advanced secondary	13	13
	College	10	10
	Bachelor	28	28
	Masters	19	19
Marital status	Married	51	51
	Single	24	24
	Widow	21	21
	Separated	4	4

Sex

The study findings as presented in revealed that majority of respondents (65%) were male and only 34.4% were female. These findings imply that male customers are highly considered to the switching behavior of banking services compared to females. These results are in harmony with those of Siswanto *et al.* (2020) who revealed that there are significant differences in switching behavior of banking customers based on gender.

Age of Respondent

The study findings as presented in revealed that majority of respondents (36.0%) were having 27 up to 35 years. These results imply youths are mostly switch from one bank to another more than other age group. These results are in harmony with those of Aslam & Frooghi (2018) who revealed that young age are more likely switch banks. Likewise Clemes *et al.* (2017) revealed that young-age contributes to customers' switching banks.

Education

The study findings as documented in Table 2 revealed that, majority of respondents about 28.0% were holding a bachelor degree level of education. These findings imply that high education

reflects respondents' ability to understand banking system and products. These results are in harmony with those of Siswanto *et al.* (2020) who revealed that there are significant differences in switching behavior of banking customers based on education. Also Clemes *et al.* (2017) reported that low education level contributes to customers' switching banks.

Marital status

The findings as presented in Table 2 holds that, majority of respondents about 56.7% were married whereas very few of them about 2.2% were widows. These results findings imply that, the decision of customer's switching behaviors is highly supported with the decision from the married couples especially in the household level. That means the decision of switching from one bank to another is prior started from the couples decision before other factors for customers to switch from one bank to another.

The Effect of Perceived Bank Charge on Bank Loans

The impact of perceived bank fees on bank loans on consumers' switching behavior was examined using the binary logistic regression model. As the independent variables, perceived bank charge factors such loan interest rates, withdrawal fees, and transaction costs were assessed. Switching patterns among customers were employed as a dichotomous predictor variable for either high or low. The following studies and interpretations of the model's fitness are presented before additional findings and discussion.

Omnibus Tests of Model Coefficients for Perceived Bank Charge

The new model (with explanatory variables included) is evaluated using the Omnibus Tests of Model Coefficients to determine whether it is superior to the baseline model (Zach, 2021). As shown in Table 2 below, the log-likelihoods of the model are significantly affected by the chi-square of 49.993 and p value of 0.000.

Table 2: Omnibus Tests of Model Coefficients for Perceived Bank Charge

	Chi-square	df	Sig.
Step	49.993	3	.000

Block	49.993	3	.000
Model	49.993	3	.000

Source: Research analysis (2022)

Model summary for Perceived Bank Charge

Typically, the combined effect of all variables was tested using the logistic model chi-square before examining the impact of perceived bank charge on bank charge on customer switching behavior. The difference between the two log likelihood function values, or the model chi-square statistic, was discovered to be 39.941. Additionally, the pseudo R² was likewise positive and high, about 0.393, supporting the notion that the model fits the data well (Cox and Snell R²=0.393 and Nagelkerke R²=0.673). These findings suggest that the model, at the 5% level of significance, accounts for 39.3% and 67.3% of the total variation.

Table 3: Model Summary for Perceived Bank Charge

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	37.941 ^a	.393	.673

Hosmer and Lemeshow Test for Perceived Bank Charge

A logistic regression goodness of fit test, known as the Hosmer and Lemeshow test (HL test), is particularly useful for risk prediction models. If the significance value is less than 0.05, the Hosmer and Lemeshow test suggests an inadequate fit. The Hosmer and Lemeshow test was 3.135 with p=0.679 (>0.05) in this model. The suggested model therefore successfully suited the given set of data.

Table 4: Hosmer and Lemeshow Test for Perceived Bank Charge

Step	Chi-square	df	Sig.
1	3.135	5	.679

Regression Results on Effect of Perceived Bank Charge on Bank Loans on Customers Switching Behavior

This section analyzes, present and discuss variables included under first objective which includes perceived bank charge on bank loans factors such are interest rates on loan, withdrawal charges and transaction costs on customer switching behavior in AKIBA commercial bank. The logic regression model presents the following mathematical model which displays the prediction of the results;

$$Y = - 1.627 - 3.534X_1 - 1.365X_2 + 4.089X_3 + \varepsilon$$

Where:

Y = Customers switching behavior (High or Low)

X₁ = Interest rate on loan

X₂ = Withdrawal charge

X₃ = Transaction cost

ε = Error estimates

Table 5: Variables in equation for Perceived Bank Charge

	B	S.E.	Wald	df	Sig.	Exp(B)
Interest rate on loan	3.534	1.615	4.785	1	.029	32.029
Withdrawal charge	-1.365	1.594	.734	1	.012	.255

Transaction cost	4.089	1.195	11.705	1	.001	59.683
Constant	-1.627	1.536	1.122	1	.289	.196

Source: Research analysis (2022)

Interest rate on loan

The findings as presented Table 5 revealed that interest rates on loan job has positive significant influence on customer switching behavior ($\beta = 3.534$), and statistical significant of 5% (p-value=0.029). This is indicated by odd ratio of 32.029 implying that having high interest rate on loans is 32.029 times likely to increase customers switching behavior than having low interest rates on loan. These results imply that interest rate on loan is very important factor to be considered by the Akiba commercial bank because it tends to their customers to switch in other banking services. These results are in harmony with those of Vyas & Raitani (2014) who revealed that price of the loan have significant effect on customers' switching behavior.

Withdrawal charge

The findings as presented Table 5 revealed that withdrawals charge has negative significant influence on customer switching behavior ($\beta = -1.365$), and statistically significant of 5% (p-value=0.012). This is indicated by odd ratio of 0.255 implying that having high withdrawals charge on the bank is 0.255 times likely to increase customers switching behavior than having low withdrawals charge on commercial bank. These results imply that withdrawal charge is not affect the customers switching behavior because majority of customers they do not feel the pain with the charges that are indirect to them. These results are not similar to those of Agarwal (2019) thus far supports that bank charges had significant influence on customer switching intention in the Indian banking industry.

Transaction cost

The findings as presented Table 5 revealed that transaction cost has positive significant influence on customer switching behavior ($\beta = 4.089$), and statistically significant of 5% (p-value=0.001). This is indicated by odd ratio of 59.683 implying that having high transaction costs on the bank is 59.683 times likely to increase customers switching behavior than having transaction costs on

commercial bank. These results imply that transaction is very important factor to be considered by the Akiba commercial bank because it tends to their customers to switch in other banking services. These results were supported by those of Nyarko (2015) who revealed that, high transaction fees have an impact on customer switching behavior.

Conclusions, Managerial Implications and Recommendations

Conclusion

The study assessed the effect of perceived bank charge on bank loans on customers switching behavior. The findings revealed that interest rates and transaction costs on loan has positive significant influence on customer switching behavior and statistical significant of 5%. On the other side, it was revealed that withdrawals charge has negative significant influence on customer switching behavior, and statistical significant of 5%. The study learned that high costs of transaction including bank charges, high interest on loans, low interest rate on savings, poor customer service, unreliable electronic service, fewer or limited range of products, and inconvenience of bank and agents location might induce customers to switch from Akiba commercial bank.

Recommendations

The study recommends to the Bank of Tanzania (BOT) that, they should stabilize the interest rate threshold to all financial and non-financial institution in order to make equitable competition between banks.

The study recommends to the Ministry of Finance and planning that, they should invest in making favorable policies, rules and procedures in order to make the customer switching behavior on the side of both sides in terms of preferences and preciseness. The study recommends the bank administration to consider lowering lending interest rates mainly for low-income individuals/businesses to encourage customer retention and enroll new customers.

Moreover, the study recommends improving customer service department through short training while advancing the bank digital department by offering more bank services electronically.

The study further recommends Akiba bank to increase product range, advertise, and increase short- and long-term saving interest rates to encourage saving and credit creation.

Acknowledgements

The authors are appreciative to the nameless referees of the paper for their tremendously useful suggestions to improve the quality of the article.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest to the research, authorship and/or publication of this article.

Funding

The authors received no financial support for the research, authorship and/or publication of this article.

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Influence of Savings and Credit Co-Operative Society on Improving Household Livelihood in Tanzania Police Force URA – SACCOS

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Abstract

This study aimed at investigating the influence of savings and credit co-operative society on improving household livelihood in Tanzania Police Force URA-SACCOS. A specific objective of the study was: To assess the contribution of savings received by SACCOS to household livelihood. The study adopted a cross sectional research design and a sample of 304 SACCOS members was selected using simple random sampling whereas Key Informants (KIs) were selected purposively. Data was collected using interview and questionnaire. Quantitative data were analyzed using multiple response and binary logistic regression model. The study found that volume of savings and withdrawal processing had a positive effect on improving SACCOS members' household livelihood. The study concludes volume of savings and withdrawal processing were important aspects in saving procedure of SACCOS contributing improving members' household livelihood in Police Force URA-SACCOS. The study recommends that, management of Police Force URA-SACCOS should improve all aspects related to loan provision and saving deposits for the purpose of improving members' household livelihood.

Key words: Saving and Credit, Household, Livelihood, Tanzania, Police Force, URA – ACCOS

Introduction

SACCOS describes a cooperative society and includes the phrases Savings and Credit to indicate that SACCOS are created primarily to receive savings and give credit as needed. These are

autonomous associations of individuals voluntarily joining to address their mutual economic and social needs through a jointly owned and democratically governed firm or corporation. SACCOS provide vital roles in capacity building, literacy improvement, advocacy engagement, and information exchange.

There are two primary antecedents of contemporary cooperation that can be used to chart the global development of SACCOS. The first was the emergence of modern cooperation among workers in some European industrial towns in the 1840s, particularly in Britain and France. In response to the impending social calamities brought on by the Industrial Revolution, these trailblazers developed consumer and labor cooperative models to protect and advance the interests of the working class.

SACCOS were first founded in the 1920s in developing countries, but they have not contributed much to economic growth since then. When we think of countries like Nigeria, Rwanda, and Tanzania, we think of countries where small companies have not yet been able to thrive. While they were supposed to play an essential and active role in Nigeria's economic growth and development, small enterprises have underwhelmed. The lack of a focused policy environment and the prioritization of cluster and sector-specific policies have all contributed to the ineffectiveness of Rwanda's small businesses. Furthermore, the placement of Rwanda's SME Policy lack schemes within large intermediary institutions with complicated application procedures and limited assessment capacity has made them difficult to access for small businesses.

The research conducted by the Institute of Continuing Co-operative Education (ICCE) in 2014 state that, the first SACCOS was established in Moshi town by the Ismailia Group in 1938. After learning about SACCOS in the late 1950s from Michigan Credit Unions, the Catholic Church adopted the concept, which led to its rapid development. The Late Cardinal Laurean Rugambwa (then a Bishop) visited the credit unions to have a better understanding of the organization. As the number of SACCOs grew, a national organization called the Savings and Credit Co-operative League of Tanganyika (SCCULT) was established (it was renamed the Savings and Credit Union League of Tanzania, or SCULT, in 1992). SACCOS are being developed in Tanzania to aid those who have been excluded from getting financial services from formal financial institutions

and to assist lessen the negative effects of local money lenders in the communities where they operate, as detailed by (Absanto and Aikaruwa, 2013).

In its role as financial intermediaries, SACCOS are regulated by the Cooperative Societies Act (2003) and the Banking and Financial Institutions Act (2006). The introduction of SACCOs in Tanzania may be directly traced back to the monetary reforms of the '90s. These changes allowed the National Microfinance Policy to be published in 2003, expanding opportunities for cooperation in both rural and urban settings. As of 2013, there were 5,559 SACCOs in operation in Tanzania, with 3,043 located in rural areas, as reported by BOT, the country's financial stability report. Of the total 1.15 million members, 1.13 million were individuals and 24,631 were community-based organizations like SACCOS, showing that they were reaching out to the unbanked (BOT, 2013). The government's encouragement has led to a rapid growth in SACCOs over the past year (Magali & Langat, 2014), but other actors, such as donors and NGOs, co-operative officers, Moshi Co-operative University and its regional offices, and politicians, have also played a role in raising awareness of SACCOS in Tanzania. When it comes to keeping an eye on SACCOS and other cooperatives in Tanzania, the government has put in place a number of rules and regulations, as the author points out.

To mobilize savings and supply secured and unsecured market household, smallholders' producers and market entrepreneurs, micro-enterprises in rural and urban areas, the Tanzania Police Force URA-SACCOS is modeled after other SACCOS in Tanzania, all of which were founded in accordance with Cooperative Societies Act No. 20 of 2003 (URT, 2004). SACCOS were founded to promote savings among members and to use pooled funds to make loans at fair interest rates and to enable members to better economic and social situations.

Despite these objectives and successes, the literature suggests that the primary challenges facing cooperatives and SACCOS in Tanzania include poor management, fraud, a lack of capital, unethical business practices, and non-performing loans (Mohamed, 2018). For many SACCOS, these obstacles make it impossible to meet the needs of its members and achieve the goals that inspired them to create SACCOS in the first place. Failure to face competition, internal conflicts, loss of SACCO's autonomy and excessive external dependency, and a feeling of lacking ownership and control by SACCOS members are all potential outcomes (Gatimu *et al.*, 2018).

The primary goal of this research was to examine how SACCOS have helped to better the lives of Tanzanian families.

Statement of the Problem

The cooperative financial sector, including savings and credit cooperatives, has expanded significantly. Through the establishment of the Tanzania Social Action Fund and SACCOS, Tanzania has made a number of attempts to assist household incomes in the country (URT, 2002). Numerous SACCOs were founded to facilitate household members' access to cash in order to increase their income. In Tanzania, SACCOs play crucial roles in alleviating poverty among their members and the general population. As a result, numerous SACCOS have been founded to combat poverty. Despite government measures and the significant rise of SACCOS in Tanzania, members of the police force households have continued to suffer (Magali, 2014). The majorities of household members is dissatisfied with the services provided by the SACCOS and are still poor, despite the fact that the Police Force introduced SACCOS so as to increase household income for its members, but members face a challenge of lack of access to credit, which hinders their growth and sustenance (Mohamed, 2018). Therefore, this study sought to contribute to filling that gap by investigating the influence of SACCOS on enhancing household livelihoods in Tanzania.

Empirical Review

According to a study conducted in Tanzania by Churk (2015), 53.7% of respondents believed that being a member or non-member of Muvikima SACCOS made no difference, 23.2% benefited only from saving in their SACCOS account due to the lack of any other financial service provider in the area, and 23.2% acknowledged that SACCOS benefited them by providing additional capital for their small-scale businesses and agricultural activities (Churk, 2015).

Self-saving techniques that have to be done in VICOBA project where small VICOBA can join and formulate a strong VICOBA where community can make saving which the profit obtained will be used to improve their income generation activities and the study generally revealed that

there is a need assisting VICOBA group members to tackle the problems faced by women entrepreneurs using Village Community Bank in Temeke Dar es Salaam by Twamgabo (2016).

The effect of saving and credit cooperative societies on the livelihood of clients in the Moshi rural district was investigated by Malya (2020). Savings and credit cooperatives (SACCOS) were found to have a beneficial effect on asset mobilization, education, health, business, and investment. Its effects on food availability and dietary quality are substantial. In order to increase savings mobilization among SACCOS members, education on savings as a whole is essential.

Methodology

Research Design

Research design was a systematic and logical plan that guides the study in the whole process for data collections, analysis and interpreting (Burns, & Groove, 2014). The study employed a cross sectional research design. Besides, a cross sectional survey research design were also useful to collect information from the respondents at single point at time (Bisung & Elliot, 2018).

Population of the study

The study targets 1,256 Police Force SACCOS members in Dodoma city. Therefore, Police Force SACCOS members were main useful source of information regarding the influence of SACCOS on households' income in Tanzania (Police Force SACCOS, 2022).

Sampling procedure

The study employed a simple random sampling to select Police Force Households members from Dodoma city. Purposive sampling was used to select Police Force SACCOS leaders as key informants (KIs) since they were overall in-charge in the SACCOS.

Sample size

A sample size refers to the number of participants included in the study. Sample size for the study will be calculated using a formula derived from Yamane (1967) where a population size of

1,256 which includes Police Force SACCOS members selected randomly to represent the total of population at confidence level of 95% and level of precision of 5% as indicated below:

$$n = \frac{N}{1 + N(e)^2} \quad \dots \dots \dots (i)$$

Where,

n is the sample size

N is the population size = 1,256

e is the level of precision (sampling error) =5% or 0.05

$n = 1,256 / [1 + 1,256(0.05)^2]$

n=304

The study constituted 304 respondents including randomly selected Police Force SACCOS members. Creswell (2013) argued that, 30 cases is bare minimum for the studies in which statistical data analysis is to be done regardless of their population size

Data collection and Analysis Methods

Data was collected using interview and questionnaire. Quantitative data was analyzed by the Statistical Package for Social Sciences for Windows version 20 (IBM SPSS) as analytical tool. The binary logistic regression used to examine the contribution of saving deposit by SACCOS on improving household livelihood. Binary logistic regression model applied based on the fact that dependent variable (household livelihood improvement) categorized into dummy variable (1, 0). The binary regression equation was as follows:

Binary regression equation for saving deposit

$$\Pr(Y=1/x) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_i \dots \dots \dots (ii)$$

Where by:

Y= Improved livelihood

B_0 = Constant factor

X_1 = Volume of Saving

X_2 = Maturity time

X_3 = Processing time

X_4 = Amount deducted

ε = Error term

Findings and Discussion

Reliability Test Results

As shown in Table 1 the reliability of the variables ranged from 0.930 to 0.870 indicating a high degree of reliability.

Table 1: Reliability Test

Variables	Cronbach's Alpha (α)	Number of items
Savings	0.870	4

The results show that all variables met the Cronbach Alpha value of above 0.7 as recommended by Fraenkel and Wfallen (2006) and were therefore considered for subsequent further analysis. Therefore, the internal consistency was considered to be sufficiently high and to have adequately measured the study variable.

Contribution of Saving Received by SACCOS to Household Livelihood

The binary logistic regression model was used to evaluate the contribution of savings to household survival (Table 2). The Omnibus Tests of Model Coefficients provide an overall assessment of the model's performance. The Cox & Snell R square and the Nagelkerke R square provide information regarding the amount of variance in the dependent variable that the model can account for. According to Table 2, the two values of 0.521 and 0.601 indicate that the variability of this variable explains between 52.1% and 60.1% of the variance. This demonstrates the validity of the fit test.

In addition, the Hosmer and Lemeshow Test results demonstrate an additional method for assessing model fitness. In this test of model fitness, a number below 0.05 indicates a poor fit,

while a value above 0.05 indicates a good fit. Since the significance level in Table 2 is 0.511, which is greater than 0.05, it can be concluded that the model fits very well.

Table 2: Binary logistic regression results on saving received by SACCOS (n=304)

Variables	B	S.E	Sig (P)	Exp (B)
Volume of savings	0.325	0.401	0.011	6.280
Maturity time	0.103	0.204	0.211	1.237
Processing time	0.425	0.226	0.006	4.343
Deductions	-0.131	0.201	0.023	2.035
Constant	2.015	1.204	0.112	0.105
Omnibus Test (χ^2) = 28.8(7), P= 0.02				
Hosmer and Lemeshow (χ^2) = 5.381 (3), p=0.511				
Pseudo R ² : Cox and Snell R square = 0.521				
Nagelkerke R square = 0.601				
-2 Log Likelihood =14.121				

Volume of Savings

Findings in Table 2 revealed that the volume of savings had a positive effect on improving SACCOS members' household livelihood ($\beta = 0.325$) and was statistically significant at 5% level (p-value = 0.011). The results revealed that a unit of increasing volume of savings by savings received by SACCOS will lead to improving SACCOS members' household livelihood by 32.5%. This also has been indicated by an odd ratio of 6.280, implying that the likelihood of a volume of savings to improve SACCOS members' household livelihood is 6 times.

The findings supported by Melania and Justin (2015) argue that, the more savings that SACCOS members had, the more likely their household livelihoods would improve. This was because they would have more money to invest in their businesses or to cover unexpected expenses. Additionally, having a large amount of savings also gave SACCOS members a sense of security and stability.

Processing time

Findings in Table 2 revealed that the withdrawal processing time had a positive effect on improving SACCOS members' household livelihood ($\beta = 0.425$) and was statistically significant at 5% level ($p\text{-value} = 0.006$). The results revealed that a unit of increasing withdrawal processing time by savings received by SACCOS will lead to improving SACCOS members' household livelihood by 42.5%. This also has been indicated by an odd ratio of 4.343, implying that the likelihood of a withdrawal processing time to improve SACCOS members' household livelihood is 4 times.

The findings concur with Hezron and Muturi (2015) found that, withdrawal processing time had a positive effect on improving SACCOS members' household livelihood in Kenya. This finding suggests that SACCOS members who experienced a shorter withdrawal processing time were more likely to have improved their household livelihoods. This suggests that the faster SACCOS can process withdrawals will help improve members' economic conditions.

Deductions

Findings in Table 2 revealed that the amount deducted during withdrawal had a negative effect on improving SACCOS members' household livelihood ($\beta = -0.131$) and was statistically significant at 5% level ($p\text{-value} = 0.023$). The results revealed that a unit decrease of amount deducted during withdrawal by savings received by SACCOS will lead to decrease probability of improving SACCO's members' household livelihood by 13.1%. This also has been indicated by an odd ratio of 2.035, implying that the likelihood of a deduction during withdrawal to improve SACCOS members' household livelihood is 2 times.

The findings supported by Langat (2016) found that, the amount deducted during withdrawal had a negative effect on improving SACCOS members' household livelihood, as it reduced the amount of money available to them. This, in turn, made it more difficult for them to purchase essential goods and services, such as food, shelter and medical care. Additionally, it reduced their ability to save money and secure financial stability in the future.

Conclusions, Recommendation and the Area for Further Research

Conclusion

The study found that, volume of savings and withdrawal processing had a positive effect on improving SACCO's members' household livelihood. However, amount deducted during withdrawal had a negative effect on improving SACCOS members' household livelihood. Therefore, the study concludes that, volume of savings and withdrawal processing were important aspects in saving procedure of SACCOS contributing improving members' household livelihood in Police Force URA-SACCOS.

Recommendation

The study also found amount deducted during withdrawal had a negative effect on improving SACCO's members' household livelihood. The study recommends that, management of Police Force URA-SACCOS to reduce amount deducted during withdrawal. This will help many SACCO's members to save for the purpose of improving their livelihood.

Area for Further Research

Based on the findings from this study, the recommended area for further research includes;

Study on the influence of SACCOS on improving members' household livelihood for more than one region need to be conducted so as to capture geographical, cultural, social, economically and technological differences. Similar study should be undertaken in other SACCOS within Dodoma city. Since the study conducted only in one SACCOS this will help to generalize the results to household members regarding to livelihood improvement.

Acknowledgements

The authors are grateful to the anonymous referees of the journal for their extremely useful suggestions to improve the quality of the article. The authors also are thankful to the management of the College of Business Education (CBE) whereas this manuscript emanated from the Dissertation of Masters of Business Administration in Finance and Bankig. Usual disclaimers apply.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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Benefits of Internal Procurement Auditing on Performance of Procurement Function: A Case of Rural Water Supply Sanitation Agency in Dodoma

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Abstract

The purpose of this study was to access the benefits of internal procurement audit on performance of procurement functions in Rural Water Sanitation Agency (RUWASA) in Dodoma, Tanzania with an aim of making recommendation on internal procurement auditing. The study aimed to access how frequency check, free and unrestricted access of procurement documents and provision of audit report to RUWASA Management benefit the procurement performance. A cross sectional research design was employed where 14 out of 52 respondents who were the members of tender board and heads of departments and units were interviewed. The data were collected using the interview guide and the collected data were analyzed using qualitative techniques. The study concludes that, the benefits of internal procurement audit are very important in the performance of procurement functions. Finally, the study recommends that, RUWASA should maintain the frequency of check, free and unrestricted access of procurement records and provision of report which will improve the performance of procurement functions.

Keywords: Procurement, Internal Procurement Audit, Procurement Performance

Introduction

RUWASA as one of the government's agencies under the Ministry of Water was created under Act No.5 of 2019 (Parliament of the United Republic of Tanzania, 2019) with the main functions of planning, designing, constructing and managing water supply and sanitation projects in rural areas in the Mainland Tanzania. Since was created, RUWASA has been funded by the government and donors to implement and supervise water projects in rural areas of the country. Due to its responsibilities, RUWASA is subjected to auditing on procurement functions. The Unit responsible for conducting the procurement audit is the Internal Audit Unit.

Statement of the problem

The internal audit is needed to ensure that all public expenditures allocated to RUWASA are properly used taking on board economy, efficiency and effectiveness of each transaction (Public Audit Act, CAP 418 R.E. 2021). In ensuring a proper functioning of a procurement of the Tanzanian Government Agencies RUWASA inclusive, the internal audits are used as a means of independent verification to minimize record keeping errors, asset misappropriation, fraud and corruption within a public institutions and non-government (Jembe & Wandera, 2019; CAG Report, 2020).

Despite that RUWASA is subjected to procurement audit due to its responsibilities, recent evidences from Public Procurement Regulatory Authority (PPRA) Annual Performance Report of 2021 revealed that, its compliance to procurement laws along with its regulations is still challenging. For example, Controller and Auditor General Report for financial year 2021/2022 show that, RUWASA scored above 90% in the tender document preparation for all projects which was tested. The scores were above the required marks of 60% and on the side of the compliance, it was opposite as, it scored 58% due to several reasons such as expiring of the bid validity period and performance bonds for the seventy five percent (75%) of the projects tested.

Another reason for underscore for RUWASA was that, some of the tender were not approved by the tender board which is contrary to Public Procurement Act No. 07 of 2011 as amended by Regulation GN No.446 of 2013. Also, it was observed that, eight percent (80%) of procurements was done without been initiated by the user department through the form number two. Since, the required performance compliance is sixty percent (60%) and statistical evidence has shown that in various occasions RUWASA has not been able to attain the required percentage, it is important to assess whether there are benefits associated with the internal procurement auditing in RUWASA. Moreover, the benefits of procurement audit on performance of procurement function on public sector in Tanzania has received little empirical attention. Therefore, this study intends to examine the benefits of internal procurement audit on performance of procurement function in Rural Water Supply and Sanitation Agency Head Quarter Office.

Research objectives

The general objective of this study was to examine the contribution of internal procurement audit on performance of procurement function in Rural Water Supply and Sanitation Agency in Dodoma, Tanzania. While specific objective was to assess the benefits of internal procurement auditing on performance of procurement function in Rural Water and Sanitation Agency in Dodoma.

Theories

The study was supported by two theories which were Transaction Cost Analysis theory by Williamson (1975) and Institutional theory propounded by Scott in 2004.

Empirical review

The researcher suggested that, when there is a good frequency of audit check, free and unrestricted audit to the auditors and provision of the audit report will benefit the organization and increase performance of the procurement function. In this case, the auditor must prepare and present to the organization, its audit plan which will show when and how the audit will be carried out in the respective financial year. During the auditing, the auditor must be; supported with required document, allowed to ask and check any document without any restriction. Finally, the auditor has to produce the report and submit to the authority for their review and response.

On top of that, Hemed (2020) summarized some factors that influence the accountability in the internal procurement audit in public sectors. He said, three factors which were integrity, resource auditing and procedure auditing are the most important in the procurement audit. Furthermore, Joseph I. David, (2019) insist the employment of the competent auditor to perform the internal procurement audit to the government organizations. Also, he suggested the internal audit staff should have enough knowledge on the procurement procedures. Procurement function.

Method

The research was conducted at the Rural Water and Sanitation Agency in Dodoma, its targeted a sample size of 52 respondent out of population was 60 RUWASA staff from Head of Departments and Units (6), Tender Board members (8), PMU (7), and User Departments (31). These groups were considered for the study because of their strategic and operational interaction with the procurement function. The researcher selected the agency because the effectiveness of water supply in rural areas is needed in order to ensure equitable, sustainable and productive

rural economies. This is through the performance of procurement functions while taking procurement audit as the appraisal factor (ILO, 2020).

Research approach

Qualitative research approach was used together at the same time. The approach was selected because it provides more complete understanding of a research problem than using qualitative research approach. Since qualitative data were collected by using interview methods as a preferable in capturing in depth information in relevant research questions.

The researcher used both purposive sampling method and simple random sampling method whereby respondents from the respective department and units, tender board, PMU, and user department

Sampling procedures

The researcher used both purposive sampling method and simple random sampling method whereby respondents from the respective department and units, tender board, PMU, and user department were selected.

Purposive Sampling method

The researcher used purposive sampling method whereby respondents from the respective Departments and Units and Tender Board members were selected on the basis of experience and knowledge of respondents at RUWASA. The method was used because purposively the researcher has to select respondents with experience, practicing a managerial decision, easy availability and knowledge of procurement audit (Adam et al 2008).

Simple random sampling method

The researcher used simple random sampling method where by respondents from user department on the basis of their character and function

Data Collection Methods and Tools

An interview method was used to collect qualitative data from key informants and it was conducted at the offices of the heads of departments and tender board members considered as key informant. The choice of this method was preferred because it helped the researcher to obtain detailed and first-hand information about the study that focus was based on benefit of internal auditor on performance of procurement function and effect of tenders auditing on performance

Research design

The research design used was cross-sectional because it provides a clear 'snapshot' of the outcome and the characteristics associated with it, establish the relationship between variables at a specific point in time with regard to RUWASA. (Jarvist, 2017: USC, 2022).

Result

The finding revealed that, internal procurement audit improves the procurement compliances ensure unrestricted access, assist in report opinion alarming employee toward the responsibilities.

Benefits of Internal Procurement Auditing on Performance of Procurement Function

This sub-section presents the findings and the discussion of the second specific objective which intended to benefits of internal procurement auditing on performance of procurement function in Rural Water and Sanitation Agency. The specific objective was focused three areas which are internal auditor's frequent check on procurement, internal auditor's free and unrestricted access to procurement records, and internal auditor's regular provision of reports to management contributed towards performance of procurement.

Internal Auditor's Frequent Check on Procurement

The findings revealed that there are benefits to internal procurement auditing, and that frequent audits on procurement compliance issues improve procurement compliance. For instance, during interview one of the key informants has this to say:

".... Internal auditor's unrestricted access to check procurement transaction records increases the possibility of internal auditors in detecting fraudulent practices and identifying noncompliance issues with the procurement laws..." (Head of department No 5)

The findings are consistent with the findings of Njoki *et al.* (2021), who discovered that internal audit reviews on rule and regulation compliance add value to the organization by assisting

management in evaluating and improving the effectiveness of risk management, internal control, and governance processes.

Internal Auditor's Free

Another benefit of internal procurement audit revealed from the participants is through the independence of internal auditors to provide his or her opinions. For instance, during interview one of the key informants has this to say:

In our institution the internal auditors are free in present their opinions regardless of their internal involvement on the day to day activities of the institution. Therefore, through this the institution is profitable in terms of performance of internal controls and compliance of procurement activities...” (Head of department No 3)

The study findings concur with Bubilek, (2017) who affirms that, internal audit checks and audits of organization's operations and documentations guarantee that, viable internal controls are developed which assists the senior management with the task of ensuring organization's laws and policies are being complied with. Similarly, Pickett (2015) indicated that, the internal auditing minimizes dangers of disappointment and secures administration in specialized examination that's past their information by indicating to infringement of standards and progressing compliance levels.

Unrestricted access to procurement

The findings also revealed that one of the benefits of internal procurement audit is through the unrestricted access to procurement. Through this internal procurement audit assists in identifying some errors as the results to correct them for the benefits of organization procurement performance. During interview one of the key informants has this to say:

“... Reveal the weakness of internal control and will present before the issue which might affect the procurement function. And early problem saving and better performance of a procuring entity...” (Head of department No 4)

Similarly, Bitesigirwe (2019) stated that the main role of internal auditing is to add value to the organization by performing assurance and consulting activities that top management cannot monitor, which protects management in technical analysis that is beyond their knowledge. Likewise, Al-Twaijry *et al*, (2014) reported that, the internal audit can bring added value within the organization by helping organizations to achieve its economic objectives through making implementation of internal audit recommendations by senior management.

Internal Auditor's Regular Provision of Reports

This means that regular internal audit checks on procurement performance issues contribute to the benefits required by public procurement. It also implies that conducting regular internal audits on procurement is an important factor in improving procurement compliance in the public sector. For instance, during interview one of the key informants has this to say:

“... eventually internal auditor's regular provision of reports helps the management to make decision. It's also helps the external auditor to be confident in his or her report and it increase to the employees' guidelines to perform well in their activities...” (Head of department No 1)

These results are consistence to those of Njoroge (2016) who found that, the internal audit Independence and authority have impacts on organization's execution which execution is improved by there being a clear arrangement on the establishment of the internal audit function.

Conclusion and Recommendation

Conclusion

The study concludes internal procurement audit is beneficial to RUWASA since it ensures better performance of procurement audit on tenders and improvement on procurement compliance. Other benefits of internal procurement audit are; it ensures achievement on value for money from a procurement items, it reduce time of procurement processes, it increases integrity and minimize frauds and mistakes to the procurement proceedings.

Recommendation

The study recommend that RUWASA should maintain that the frequency of check, free and unrestricted access and provision of report which will enhance the effective and efficiency audit of the documents and for procurement compliance to be more effectively and efficiency, internal procurement audit program, should be planned well especially from tender preparation, negotiation, awarding, and all entire performance of procurement function including more delivery management, good relation management, record keeping and ongoing monitoring and evaluation.

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Procurement Planning and Efficiency in Public Procurement at the Ministry of Education, Science and Technology in Tanzania: A multidimensional approach

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Abstract

This paper examines the effect of procurement planning on the efficiency of public procurement at the Ministry of Education, Science and Technology, Tanzania. A cross sectional research design was employed under which data were collected once. A sample of 108 was selected using proportionate stratified sampling. Qualitative data were collected using interview method and quantitative data were collected using survey method whereas interview guide and questionnaire were used as data collection tools respectively. The content analysis was used for analyzing the qualitative data and binary logistic regression model was conducted. The main findings revealed that, procurement planning was positive and significant with public procurement efficiency in terms of delivery time and reduction of procurement costs ($p < 0.05$). Therefore, it was concluded that procurement planning practices which includes preparation of procurement plans, involvement of key personnel and implementation of prepared plans are positive and significant related to public procurement efficiency at the ministry and based on these findings it was recommended for the organization to embrace these practices and policy makers to formulate necessary policies and procedures and making sure that there are well designed procedures concerning procurement planning practices in public sector.

Keywords: Procurement, Procurement Planning, Public Procurement, Procurement Costs, Delivery Time

Introduction

Public procurement has long been regarded as an important government function in both developed and developing countries (Chepleting & Makokha, 2017). The impact of this function on the Gross Domestic Product (GDP) is significant, as public procurement accounts for approximately 18.42 percent of global GDP, according to Mahmood (2010). Mokogi et al. (2015), on the other hand, claim that public procurement accounts for up to 25% of GDP in developing countries. Therefore, given the importance of public procurement, efforts should be made to improve procurement efficiency in order to properly manage government funds. The overall efficiency of the procurement function is determined by how well it is strategically positioned to serve the organization (van Weele, 2006). According to studies, there are issues associated with strategic procurement practices that have been overlooked and are critical to the efficiency of the procurement function. Strategic procurement practices that can influence procurement efficiency must be prioritized.

According to one body of literature, procurement planning is a strategic function in public procurement activities. Procurement planning enables organizations to determine the costs and purchase options that may increase the likelihood of reducing the risk of delays and cost escalation, both of which have a negative impact on public procurement efficiency. Tanzania is one of the developing countries concerned about the efficiency of public procurement, which prevents the country from attaining its ultimate goal of achieving value for money (PPRA, 2020; CAG, 2020). A variety of factors can have a negative impact on this function. Shoddy work, partial or non-delivery of required goods and services, poor quality of required goods and services, corrupt business practices, incompetence, favoritism, and political interference and/or influence are some of these factors (CAG, 2020). In general, it has been reported that the public procurement function is not being performed as well as desired due to issues affecting the performance of this function (Matto, 2017; Namusonge, 2011). For example, audit reports show that some government ministries performed poorly in procurement functions (PPRA, 2020, CAG, 2020).

Despite the fact that an efficient public procurement system is important in many ways, including achieving national objectives and progressing the nation's economy (Kabaj, 2003; Badaso, 2014), concerns about efficiency procurement have an impact on the desired outcomes. As a result, procurement planning as a strategic function in public procurement may be important in ensuring that the desired level of procurement efficiency is achieved. The current study aims to investigate the influence that procurement planning has on the efficiency of public procurement at the Ministry of Education, Science, and Technology in Tanzania in terms of delivery time and procurement cost reduction. Previous studies in this area have not considered the multiple dimensions of public procurement efficiency and thus are limited in examining this gap.

Objective

The purpose of this study is to look into the influence of procurement planning on the efficiency of public procurement at the Ministry of Education, Science and Technology in Tanzania.

Review of Literature

According to Burt et al. (2004), the purchasing function that enables organizations to get goods and services from third-party vendors is known as procurement planning. It is expected that government agencies in Tanzania that are responsible for public procurement will plan their activities related to procurement (URT, 2011). The process of planning can consist of three key steps: first, identifying the things that need to be procured; second, identifying the procedure for getting the necessary inputs; and third, establishing a schedule of timeframes for delivery or execution reasons. Identifying the things that need to be procured, identifying the procedure for getting the necessary inputs, and establishing a schedule of timeframes for delivery or execution reasons (Apiyo & Mburu, 2014).

The strategic role of procurement can only be played out to its full potential if it is factored into the process of formulating the company's overall strategy plan and given the same level of priority as the other functional areas. This is the only way that the strategic role of procurement can be played out to its full potential (Mrope, 2018). The activities that are related to procurement planning are essential because they allow the organization to aggregate its requirements, avoid the need for emergency procurement whenever it is feasible, and integrate

its planned expenditures with the organizational budget. Because of this, engaging in these activities is necessary (URT, 2011). It is essential to keep in mind that there is a direct connection between the planning process of procurement and the achievement of value for the money invested in public contracts. This is something that should not be forgotten (Changalima, 2016; Panga et al., 2015).

On the other hand, the application of planning as a strategic practice enables a company to organize its priorities and more effectively satisfy the requirements of its clientele (Mori et al., 2014). As a requirement of the planning stage of the procurement process in public procuring organizations, participation from all user departments is required. This is done as part of the procurement planning process (URT, 2011). When viewed from this perspective, the involvement of significant stakeholders in the planning process is absolutely necessary (Mori et al., 2014). As a direct result of this, entities that make purchases for the public sector are strongly encouraged to place a primary emphasis on procurement planning (Apiyo & Mburu, 2014).

Theoretical Framework

This management theory and corporate ethics came into existence in the 1980s under the name "Stakeholder Theory." The theory places an emphasis on stakeholders, who are defined as any group or individual who either has the ability to influence the accomplishment of an organization's goals or is influenced by the success of the organization in achieving those goals (Freeman 1984). Participants in this research who are considered to be stakeholders are the following: shareholders, employees, customers, distributors, local communities, and suppliers. This theory is pertinent to the investigation because it enables an organization to effectively manage stakeholders who either influence or are influenced by the behavior of the business, as well as evaluate the characteristics of these partners. Additionally, this theory enables an organization to do so in an efficient manner. Therefore, the applicability of the theory in this investigation is predicated on the fact that various stakeholders are involved in the activities of procurement. The majority of these include user departments, procurement professionals, accounting officers, members of tender board and evaluation committees, as well as other individuals. In addition, the study's variables, which include procurement planning, involve important stakeholders, which are user departments that provide inputs for the preparation of the budget and plan.

Methodology

Study area and research design

This research was carried out at the Ministry of Education, Science, and Technology in Dodoma, Tanzania. As a result, this area was chosen for research. The ministry was purposefully selected based on the nature and scope of its procurement activities, as the ministry has allocated more than 51 billion Tanzania in the fiscal year 2021-2022. (Ministry of Education, Science and Technology, 2022). Because the data was only collected once at a specific time, the study was designed as a cross-sectional survey (Saunders et al., 2009). Using this design, the researcher may be able to obtain data quickly and establish the causal and effect relationships between study variables. This design was chosen to be used for these reasons. Furthermore, this design is cost-effective and takes less time to complete; thus, it was deemed appropriate.

Population and sampling

The study population consisted of 219 people who work at the Ministry of Education, Science, and Technology in Dodoma, Tanzania. As a result, respondents involved in procurement operations were asked to participate in the study, and information was gathered from them. The list includes PMU employees, Tender Board members, and user departments made up of other members of the organization's workforce. The researcher selected 142 respondents from a target population of 219 employees for the study. This sample size was calculated using Yamane's (1967) method to determine the number of participants in this study, as recommended by Magigi (2015). Therefore, the sample size of this study was 142 respondents. However, the sample changed to 108 during data collection as 34 questionnaires were not returned.

$$n = \frac{N}{1 + N(e)^2}$$

This study employed proportionate stratified sampling technique. In this technique, a proportion of a desired sample size over target population (142/219) was applied to all strata as presented in Table 1. In addition, the technique of purposive sampling was utilized in order to acquire key

informants (KIs), which included members of the tender board, heads of departments, and PMU staff.

Table 1. Sample size composition

Strata	Target population	Proportion	Sample
PMU	17	(142/219) *17	11
Tender board	08	(142/219) *8	5
User departments	194	(142/219) *194	126
Total	219		142

Data collection and variables' measurements

This study employed questionnaires to collect data from respondents. Questionnaires were employed in order to reduce time that would otherwise be used during interviewing procedures. During data collection, 142 questionnaires were administered for collecting primary data from selected respondents. However, only 108 questionnaires were successfully returned. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for the purposes of data analysis and reporting; a rate of 60% is considered to be satisfactory; and a response rate of 70% or more is considered to be exceptional. Thus, a response rate of 76.1% is considered to be excellent for data analysis. Also, to collect qualitative data, the interview method was employed. This was used in this study with key informants being interviewed face-to-face during data collection.

Information in Table 2 provides insights on the measurement of the main variables that were used in this study. As used in the previous studies all variables were measured into five-point Likert scale. However, the two variables with ** were later transformed into binary responses in which values of 3.5 and above mean scores were considered to be “on time” (for delivery time) and below were considered to be “otherwise” and to cost values were transformed to “less costly” and “otherwise”

Table 2. Measurement of variables of the study

Variables	Sub-variables	Measurement scales	Sources

Procurement planning	Preparation of procurement plans	5-point Likert scale	Basheka (2008), Changalima <i>et al.</i> (2021) and Bryson (2018)
	Involvement of key personnel	5-point Likert scale	
	Implementation of prepared plans	5-point Likert scale	
Public procurement efficiency	Time**	5-point Likert scale	Wachiuri (2018) and Goshie (2020)
	Cost**	5-point Likert scale	

Analytical Model

The data collected for this study was analyzed using a combination of qualitative and quantitative approaches. To analyze qualitative data, content analysis was required, whereas quantitative data analysis required statistical methods such as descriptive and inferential statistics using the Statistical Package for Social Sciences (SPSS) as an analytical tool. Descriptive statistics included the computation of frequency, mean, and standard deviations, which were presented in tables. In the latter case, a binary logistic regression model was used to achieve three distinct goals. Since all indicators for the dependent variable were transformed to binary outcomes (public procurement efficiency), this was true for all indicators (delivery time and less costly). The binary logistic was expressed in the following equation.

$$\text{Logit} (P_i) = \log \left[\frac{p(x)}{1-p(x)} \right] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

Logit (Pi)	=	Y is a binary dependent variable (1= efficiency; 0 = otherwise)
α	=	intercept of the equation
β_1	=	Regression coefficient for preparation of procurement plans
β_2	=	Regression coefficient for involvement of key personnel
β_3	=	Regression coefficient for proper implementation of plans
x_1	=	preparation of procurement plans
x_2	=	involvement of key personnel
x_3	=	proper implementation of plans
ε	=	error term

Results and Discussion

Reliability Test

In this study, the internal consistency was deemed adequate for measuring the variable under study. As recommended by Cronbach (19951) all variables were considered for further analysis because their Cronbach Alpha values exceeded 0.70. Results in Table 3 show that the reliability of the variables ranged from 0.767 to 0.951 indicating a high degree of reliability.

Table 3: Internal consistency reliability

S/N	Variables	Number of items	Cronbach's alpha
1	Preparation of procurement plans	3	0.767
2	Involvement of key personnel	3	0.847
3	Implementation of prepared plans	3	0.951
4	Time	3	0.897
5	Cost	3	0.889

Sample Characteristics

According to Table 4, the majority (60.2%) were male, while the remaining 39.8% were female. These findings imply that the study included both male and female participants, though male respondents outnumbered females. According to Table 4, 78.7% of respondents had a bachelor's degree, followed by 13% and 8.3% who had a master's degree and a diploma, respectively. These findings imply that the majority of respondents in this study had tertiary education and were familiar with the PMU functions as specified in section 37 (2) of PPA no. 7 of 2011 and PPA (amended) 2016. Table 4 shows that 0.9% of those polled were between the ages of 18 and 27, while 51.9 percent were between the ages of 28 and 37. While 37% of those between the ages of 38 and 47 were represented, the remaining 10.2% were represented by those between the ages of 48 and 57. These findings imply that respondents between the ages of 28 and 37 dominated the number of respondents in terms of age. According to the results in Table 4, 21.3% of respondents

had 0 to 5 years of experience, while 17.6% had 10 to 15 years of experience. In addition, respondents with 5 to 10 years of experience presented 57.4%. While 1.9% of those with 15 to 20 years of experience presented, the remaining 1.9 percent of those with more than 20 years of experience presented. According to these findings, the majority of respondents with 5 - 10 years of experience outnumbered the rest of the respondents in terms of years of experience.

Table 4: Sex of respondents (n = 108)

Sex	Frequency	Percent
Female	43	39.8
Male	65	60.2
Education level		
Diploma	9	8.3
Bachelor degree	85	78.7
Master's degree	14	13
Age (years)		
18 – 27	1	0.9
28 – 37	56	51.9
38 – 47	40	37.0
48 – 57	11	10.2
Experience (years)		
0 – 5	23	21.3
5 – 10	62	57.4
10 – 15	19	17.6
15 – 20	2	1.9
More than 20	2	1.9

Descriptive Statistics Results

Procurement planning

The findings in Table 6 show that the overall mean score on the preparation of procurement plans was 3.35. Because procurement plans are prepared and modified during execution to accommodate anomalies and changes, these findings imply that the majority of respondents were

in a decisive state to agree on the preparation of procurement plans. These results are in line to that of Chagalima (2016), the preparation of procurement plans is encountered with the changes that need to be adjusted in order to meet the intended requirements.

On involvement of key personnel, the overall mean value is 4.13 which implies that most of respondents agreed on the involvement of key personnel in matters pertaining procurement plans. These findings are in support with those of Bryson (2018) and Chagalima *et al.* (2021) who reported that involvement of key personnel in preparation of procurement plans is necessary for ensuring that requirements of users are included in the prepared procurement plans.

Lastly, on implementation of prepared plans, most of respondents were slightly agreed on implementation of prepared procurement plans as the overall mean value is 3.56. This result implies that implementation of procurement plans is conducted as well as perceived by procurement practitioners. The result is in support with that of Chagalima *et al.* (2021) and Basheka (2008) as their studies opined that proper implementation of procurement plans is necessary to achieve the desired level of procurement outcomes.

Public procurement efficiency

The mean and standard deviations for time and cost as used to measure efficiency in public procurement are presented in the following sections:

Time

The overall mean value for time as an indicator of procurement efficiency was 3.98. This result implies that the majority of the respondents agreed that the goods delivered to the organization are within the agreed upon time and that suppliers always meet the set date of delivery. This implies that the good are delivered at agreed time but suppliers can be reliable to order delivery and sometime are not dependable on order delivery. The findings are in line to those of Wachiuri (2018) and Goshie (2020) who employed time factor in expanding the procurement effectiveness and performance in organizations.

Cost

The results in Table 6 have shown the overall mean score for cost was 3.68. These results imply that the majority of the respondents were somewhat in agreement on the proposition that if prices

that are fair, reasonable, competitive, and affordable are used in the organization's procurement process, then procurement costs are reduced, and there is a significant financial reserve to cover all potential needs due to cost reduction. This means that the organization always save and reduce procurement costs due to fair and competitive prices and sometimes they incur more costs either due to unfair competition that may cause high prices, late deliveries, variations and sometimes receipt of poor-quality deliverables. These results are in support with that of Wachiuri (2018) on the reduction of procurement costs to meet the desired level of procurement performance in the organization.

Table 6: Descriptive statistics for procurement planning and procurement efficiency

Variables	Overall Mean	Std. Deviation
Preparation of procurement plans	3.35	1.053
Involvement of key personnel	4.13	0.796
Implementation of prepared plans	3.56	1.137
Time	3.98	0.946
Cost	3.68	1.043

Empirical Results

In order to examine the relationship between variables of the study. The inferential statistics were performed under which a binary logistic regression model was used. The dependent variables; time and costs as dimensions of public procurement efficiency were transformed into binary responses (1 = on time, 0 = otherwise) and (1 = less costly, 0 = otherwise).

The effect procurement planning on delivery time

In the first model, the variables for procurement planning were regressed to time as a dimension of public procurement efficiency. Generally, results in Table 7 show that the degree to which the predictors of procurement planning have an effect on the variable being predicted (time). Hosmer and Lemeshow test which shows the model fitness has a p value of p-value of 0.164 whereby the p-value is not significant and hence indicates that the model fits well the data. There is a variance of predictors of procurement planning that were included in the model on the efficiency of public procurement, as shown by the variance presented on cox & Snell R Square (0.241) and Nagelkerke R Square (0.336) (time). In addition, every Wald statistic has a value that is not zero,

which suggests that the independent variables of procurement planning interact significantly with the dependent variable of time that is accounted for in the model.

Table 7: Effect of procurement planning on delivery time (n = 108)

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Preparation of procurement plans	0.874	0.335	6.804	1	0.009	2.397
Involvement of key personnel	0.738	0.367	4.051	1	0.044	2.093
Implementation of prepared plans	0.818	0.257	10.145	1	0.001	2.265

Cox & Snell R Square = 0.241

Nagelkerke R Square = 0.336

Hosmer and Lemeshow test (p) = 0.164

Preparation of procurement plans and delivery time

Preparation of procurement plans as an indicator of procurement planning was found to be significant predictor of public procurement efficiency through meeting the time factor. The findings in Table 7 show that preparation of procurement plans is significant and positive related to time as a measure of public procurement efficiency ($p = 0.009$). This variable has a beta coefficient of 0.874, Exp(B) of 2.397 which implies that a change in preparation of procurement plans as indicator of procurement planning by one unit the odd of falling into a target group is 2.397. Therefore, the findings in Table 7 show that the preparation of procurement plans through procurement planning determines the efficiency of public procurement through meeting the time factor in the study area. In addition, the process of planning procurement must comply with the laws and regulations that have been established regarding procurement. These laws and regulations include the Public Procurement Act No. 7 of 2011, as amended in 2016, and the Public Procurement Regulations of 2013, along with their respective amendments in 2016. According to the findings of this study, the preparation of procurement plans should be considered a necessary factor in order to achieve efficiency in the procurement process by meeting the time factor.

The findings in Table 7 of this research lend credence to the findings of the study that was carried out by Changelima *et al.* (2021), who discovered that organizations are able to meet the timeliness of procurement activities in their respective organizations by planning their procurement activities in advance. Because of this, the plausible explanations for why there is a

relationship between the preparation of procurement plans and the time factor as a public procurement efficiency indicator are based on the fact that preparation of procurement plans is required for determining the amount of time needed for activities related to procurement. When it comes specifically to planning, there are certain issues that need to be complied with. For instance, public procuring entities need to adhere to the regulatory requirements of preparing annual procurement plans in order to ensure that they are able to meet the goods and services needs of their respective organizations in a timely manner. This is the case when it comes to the preparation of procurement plans.

Involvement of key personnel and deliver time

The presented findings in Table 7 show that involvement of key personnel in procurement planning is positive and significant related to the time factor of public procurement efficiency. The results show that the value of $p = 0.044$, beta coefficient = 0.738 and $\text{Exp}(B) = 2.093$. Based in these results, the likelihood of achieving public procurement efficiency in terms of meeting the time factor increases by a factor of 2.093 significantly for every unit change in involvement of key personnel in procurement planning. This implication of the results supports the idea that it is necessary to increase the number of key personnel in procurement planning process so as to enhance the public procurement efficiency through the time factor.

A study conducted by Bryson (2018) supports these results as these studies have emphasized on the involvement of key personnel as user departments to ensure that the procurement planning process is done effectively to meet the timeliness of procurement process in the organization. According to the findings of this study, including key personnel in decision-making processes helps to ensure that their perspectives are taken into account, which in turn improves the organization's capacity to make efficiency use of its available resources in a timely manner. Because of this result, individuals who are involved in the planning of the procurement process need to be able to detail the requirements that are necessary during the time period that is being used for planning. For example, the laws and regulations that govern public procurement stipulate that each user department within the public procuring entity must supply the PMU with a list of the required items (goods, services, and works) so that it can be incorporated into the annual procurement plan that is being prepared by the PMU. This provision needs to be made in

accordance with the law and regulations governing the public procurement process. These findings, which were qualitative, backed up the previous ones.

“In my opinion, the procurement department involves users in the provision of requirements and in the formulation of specifications to ensure that the goods procured meet our expectations. In addition, the time required to prepare specifications improves procurement timelines and reduces delays”

Implementation of prepared plans and delivery time

Time is a factor that has a significant and positive impact on the efficiency of public procurement, and this factor is positively related to the implementation of prepared procurement plans. The findings that have been presented indicate that the p value is 0.001, the beta coefficient is 0.818, and the Exp(B) value is 2.265. This indicates that the likelihood of achieving efficiency in public procurement in terms of time increases by a factor of 2.265 for each unit change in the implementation of prepared plans. This is significant because the likelihood of achieving efficiency in public procurement can have a significant impact on the economy. The findings suggest that organizations that implement their procurement plans in accordance with the requirements of procurement law and regulations are more likely to be effective in terms of achieving their procurement efficiency through the improvement of timelines in the activities associated with procurement.

This is as a result of the fact that the findings suggest that organizations that implement their procurement plans in accordance with the requirements of procurement law and regulations are more likely to be effective. These findings are consistent with those of Sandy (2013), who found that the correct implementation of procurement plans results in the achievement of procurement value for money in terms of efficiency, effectiveness, and economy. The findings of this study are in line with the findings of Sandy (2013). As a result, effective execution of procurement plans is connected to procurement efficiency, which serves as an indicator of value for money in terms of efficiency, effectiveness and economy. Therefore, procurement efficiency being the indicator of value for money is associated with proper implementation of procurement plans.

The effect of procurement planning on procurement cost reduction

The model summary for the cost as a dimension of public procurement efficiency is presented in Table 8. In this model, the variables for procurement planning were regressed to cost as a dimension of public procurement efficiency. The findings illustrate the degree to which the independent variable was influenced by the independent predictors of procurement planning (cost). Hosmer and Lemeshow test which shows the model fitness has a p value of p-value of 0.415 whereby the p-value is not significant and hence indicates that the model fits well the data. There is a variance of predictors of procurement planning that were included in the model on the efficiency of public procurement in terms of cost factor, as shown by the variance presented on cox & Snell R Square (0.231) and Nagelkerke R Square (0.313). In addition, all Wald statistics have values that are not zero, which indicates that there is some interaction between the variables of procurement planning and the dependent variable (cost). Like in the previous dimension of public procurement efficiency (time), the next section presents discussion on the nature of relationship between variables of procurement planning and cost factor as another dimension of public procurement efficiency as used in this study as presented in Table 8.

Table 8: Effect of procurement planning on cost reduction (n = 108)

	B	S.E.	Wald	Df	Sig.	Exp(B)
Preparation of procurement plans	0.573	0.279	4.238	1	0.040	1.774
Involvement of key personnel	0.722	0.311	5.399	1	0.020	2.058
Implementation of prepared plans	0.754	0.235	10.330	1	0.001	2.126

Cox & Snell R Square = 0.231

Nagelkerke R Square = 0.313

Hosmer and Lemeshow test (p) = 0.415

Preparation of procurement plans and cost reductions

The results in Table 8 show that preparation of procurement plans and cost factor as a dimension of procurement efficiency in the public sector are significant and positive related ($p = 0.040$ and $B = 0.573$). also, the results show that the value of $\text{Exp}(B) = 1.774$ implying that that a change in preparation of procurement plans as indicator of procurement planning by one unit the odd of falling into a target group is 1.774. Thus, cost factor is improving in the procurement efficiency with the improvement of the preparation of procurement plans. These results are in line to that of

Awuah *et al.* (2022) who found that through preparation of procurement plans, organizations are able to ensure costs are reduced by eliminating needless expenditures.

Involvement of key personnel and cost reductions

In addition to that, the relationship between involvement of key personnel in the procurement planning is significant and positive associated with the cost factor improvement as a dimension of public procurement efficiency as p value is less than 0.05 and beta coefficient is in positive direction. The results in Table 8 shows that $p = 0.020$, $B = 0.722$ and $\text{Exp}(B) = 2.058$. Based on these findings, the probability of achieving public procurement efficiency in terms of improving the costs factor increases by a factor of 2.058 significantly for each unit change in involvement of key personnel in procurement planning. These results suggest that involvement of key personnel in planning process for public procuring organizations determine the public procurement efficiency by improving the costs in procurement endeavors. These findings are in support with that of Changalima *et al.* (2021) who opined that involvement of key stakeholders in procurement planning significantly determines the public procurement outcomes.

Implementation of prepared plans and cost reduction

Lastly in this objective, the results presented in Table 8 show that the implementation of prepared procurement plans is positively and significantly related with public procurement efficiency in terms of cost improvement ($p = 0.001$, $B = 0.754$ and $\text{Exp}(B) = 2.126$). The results show that the likelihood of achieving cost improvement as a dimension of procurement efficiency by a factor 2.126 with every unit change in implementation of prepared plans. Therefore, implementation of prepared plans is the determinant of cost factor in enhancing public procurement efficiency. The findings of this study are in line to that Nuwagaba *et al.* (2021)). Their findings suggest that proper implementation of procurement plans is needed to enhance procurement performance by reducing the procurement costs.

Conclusions, Implications and the area for further Research

The study focused on the effect of procurement planning and the efficiency of public procurement. The study determined that all procurement planning indicators used in this study, such as procurement plan preparation, involvement of key personnel, and implementation of

prepared plans, are positive and significant in terms of time and cost as dimensions of public procurement efficiency. Based on the study's main findings, it is reasonable to conclude that procurement procedures at the Ministry of Education, Science, and Technology are carried out in a manner that includes procurement practitioners who are knowledgeable and have an adequate level of experience regarding procurement activities carried out in their respective organization. As a result, procurement planning is regarded as the primary determinant of public procurement efficiency in all measures (time and cost).

The ministry should ensure that employees involved in procurement activities are well trained in terms of proper procurement plan preparation and implementation, as this factor significantly influences the efficiency of public procurement. In addition, key personnel should be involved in the preparation of procurement plans in order to obtain the necessary inputs and improve the efficiency of public procurement in terms of time and cost.

The study makes some policy recommendations based on the main findings. It is recommended that the PPRA and other policymakers develop necessary policies and procedures in the form of directives to ensure that there are well-designed policies concerning strategic procurement practices, particularly in procurement planning activities. These activities should be carried out well in public organizations in order to improve public procurement efficiency in terms of time and cost, and well-designed policies in this regard are required for the improvement of public procurement endeavors. Finally, the study made recommendations for additional research. The study recommended that more research on similar aspects of strategic procurement practices be conducted, taking into account a diverse range of public procuring organizations, in order to increase the generalizability of the current findings. Aside from procurement planning, additional research can be conducted to include more strategic procurement practices. Because the current study only focused on procurement planning, future research can be conducted to include other variables of strategic procurement practices.

Declaration of Conflicting Interests

The authors have declared that they have no potential conflicts of interest with regard to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for their research, authorship, or publication of this article.

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Mitigating Floods Using Humanitarian Supply Chain Practice in Dar es Salaam Region: The Role of Allocated Fund

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Abstract

The study was carried out to assess the effect of allocated funds on humanitarian supply chain practices in managing flood in Ilala Municipal- Dar es Salaam. The study used a cross-sectional research Semi-structured questionnaire was used to collect data from 89 respondents who were randomly selected. Multiple liner regression as an econometric model was used to estimate the effect of government humanitarian supply chain practices in managing floods. The findings show that good practice of budget planning and presence of good rationale for allocation of fund has positive significant ($p < 0.05$) impact on managing flood. The study concludes that more than half of the participants affirm that proactive practice is essential in managing the disaster. Whereas, through funds allocation and availability of disaster management guidelines, monitoring and implementation help to control and minimize the magnitude of the disaster, particularly floods. The study recommends that timely fund allocation is essential for disaster preparedness. Therefore, for successful disaster management particularly flood which is common

in most of communities in Tanzania the Ministry of Planning and Finance should ensure that there is sufficient budget to support humanitarian supply chain practices.

Keywords

Allocated Fund, Humanitarian Supply Chain Practices, Flood Management.

Introduction

During recent decades, compelling evidence, shows that the incidence of disasters has grown at an unprecedented rate all around the world (Liu, 2017), The circumstances of either natural or man-made disasters, such as famine, earthquakes, tsunamis, floods, war, bombs, cyclones, diseases, and extreme poverty, among many others, can be found anywhere in the world. Disasters are predicted at any moment in time. Disasters disrupt people's lives by causing displacement from one place to another, fatalities, and injuries. They destroy livelihoods and undermine years of economic progress (Mohamed, 2012).

This has resulted to invest in humanitarian supply chain management at large. Different governmental and non-governmental groups demonstrate humanitarian supply chain practices in response to various calamities. Aid group's deal with urgent humanitarian issues such the provision of medicines, food assistance, water and sanitation, and housing for the impacted societies, among others (Kassahun, 2018).

In the past few years, tsunami is in South Asia (2004), Hurricane Katrina in the United States (2005), earthquakes in Pakistan (2005), Java (2006), China (2008), and Haiti (2010), as well as Superstorm Sandy (2012) are some examples of the deadly disasters (Taskin & Lodree, 2015). The continent is most influenced by natural disasters, in terms of mortality and terms, 63% of total 2012 economic losses happened in the Americans due to the major impact of Hurricane Sandy beating the Eastern Seaboard of the United States, and the drought impacting 62% of the adjacent United States (CRED, 2013).

In African countries, Heavy rains and flooding affected 600,000 people in 16 West African nations in September 2009. The poorest hit countries were Burkina Faso, Senegal, Ghana and Niger. This occasion closely followed the 2007 floods that displaced more than a million people

in Uganda, Ethiopia, Sudan, Burkina Faso, Togo, Mali and Niger, and claimed over 500 lives, and the 2008 flooding in Mozambique (Baldassare, 2010). From that point of view, humanitarian disasters and the operating the logistical activities that assist response to them are increasingly common and worldwide in nature (Vega & Roussat, 2015; Day *et al.*, 2012).

In the case of Tanzania, managing disasters is also poor due to the poor humanitarian supply chain practice. Tanzania has been suffering from a number of disasters that have resulted into losses of human beings' life, property and damage to environment. The extent of damage and losses depend on the ability to respond quickly to emergencies (URT, 2018). The experience by Mwangoka (2017), shows that in Tanzania when disaster occurs such as floods, humanitarian supply demand services are not met on time with saving lives and properties. This has been justified by IFRC assessments from 2021 showed that strong winds and flash floods continued for a few days after the storm made landfall in 8 regions of Tanzania (Dar es Salaam, Mbeya, Shinyanga, Kagera, Kilimanjaro, Manyara, Zanzibar Island, and Morogoro). A total of 6,001 households (30,005 people) were reported as directly affected, and 22 people died. Understanding the importance of the humanitarian supply chain in disaster management, various studies such as Mwangi (2020) noted that there is a low humanitarian logistics in disaster management, depicting low contribution of humanitarian logistics supply in disaster management.

However, the above authors conducted studies in humanitarian supply chain practice but less attention issue on effect of legal and regulatory framework, allocated of fund, human resource as well as infrastructure keys success factor in performance of managing flood. This study attempts to assess determinants of government humanitarian supply chain practices in managing floods in Ilala Municipal, Dar es Salaam.

Review of Literature

The term “humanitarian Supply Chain Practices” as the practice which consists of a network of interaction between government, locally based agencies, suppliers, and other stakeholders that co-ordinate the flow of supplies, services, finances, and information for the purposes of responding to beneficiary needs (CSCMP, 2014). The study shows that, each country has the

first and foremost responsibility to take care of the victims of emergencies occurring on its nation by initiating, organizing, coordinating, and implementing humanitarian assistance.

The ideal situation is that, one would expect to see that there is proper management of disasters such as floods through humanitarian supply chain in terms of policies, funds, experts, infrastructures and reliable supply. This is because there are government organizations such as the Prime Minister's Office' Disaster Management Department (DMD), the Tanzania Meteorological Agency (TMA) and the Ministry of Water and Irrigation (MWI). All these are instruments designed for managing disaster such as floods (Mwangoka, 2017). The period from contribution to supply of humanitarian aid is very critical to the provision of timely help to those in need. It is the work of supply chains to safeguard that humanitarian aid items get to where they are required within the shortest time in order to save lives (Wabanhu, 2017).

However, in the practice the reality is quite different from expectations of many because flood disaster management is poor. This can be evidenced during the incidences where no proper humanitarian supply chain practice is taken to support the victim's despite of the presence of aforementioned government institutions. This is according to lack of adequate resources to support such practice which is contrary to resources-based theory whereas it needs to have adequate resources at large. The report of NAO, (2021) show that for the year 2016 to 2020 there has been an increase in the number of reported deaths due to floods ranging between 17 in the year 2017 and 122 deaths in 2020. On the other hand, it found that the proportion of the number of reported deaths due to floods is increased compared to the cases reported from all other disasters was high in the year 2017 (77%) and for the year 2020, (91%).

From the analysis of the literature presented in this study, it suffices to argue that a number of studies have been carried out in relation to humanitarian supply chain management such as rules and regulation, purchase practices, disaster operation, teamwork, information management, professional staff, donor funds, technology, cultural awareness, moral commitment, coordination in planning and decisions. However, the reviewed studies differ from the present studies in terms of methodology and findings.

A study by Chingono and Mbohwa (2016) conducted study on the information technologies (IT) for humanitarian supply chain management Zimbabwe. The study result showed that IT use in

humanitarian logistics and supply chain management help into coordination in delivery, collaboration, transaction processing and supply chain planning. The study continuous explain that, the shortage of skills, supplier support and customers integration system (CIS) identified as major problems in humanitarian logistics and supply chain management through information technologies. Meanwhile the research study by Ngwenya (2015) in South Africa was aimed at giving an insight into the supply chain management best practices that are employed by the United Nations World Food Programme (UNWFP) during its humanitarian natural disaster operations in the southern African region. The main findings highlighted the fact that for successful disaster operations essential supply chain activities such as procurement, transportation and logistics, collaboration and information management should be tactically planned and measured as critical success issues.

The study conducted by Beyene (2018) assess the external factors that impact humanitarian logistics performance in Ethiopia. On his study, focused only on donor funding and government factors as key factors external influence humanitarian logistics performance. In this study, author leave a gap as s(he) fails to consider to examine the effect of legal and regulatory framework, human resources and infrastructure.

In East African the study of Mohamed (2012) established supply chain management procedures and the effects they had on Kenyan humanitarian organizations' performance. The study's findings focused on maintaining good supplier relationships, effective and efficient internal operations, continuous improvement, flexible production processes, and use of technology to speed up humanitarian work, inter-organizational integrations, and simplicity in internal operations. Also, the study of Nyamu (2012) examined the impact of challenges in humanitarian supply chain management in Kenya. The results indicated that poor recognition on the role of supply chain in humanitarian, late delivery, demand uncertainty, poor transportation infrastructure, and high transaction were the major challenges facing humanitarian supply chain management and leave a gap as they fail to address determinants of government humanitarian supply chain practices in managing floods.

Also, the purpose of Mwangi's study (2020) was to investigate the logistical aspects that affect how responsive humanitarian groups are in Kenya. The Kenya Red Cross Society was the

subject of the researcher's choice of case study methodology (KRCS). The finding relied on donations for funding, and delays had an influence on its ability to respond to disasters. Additionally, road infrastructure had an impact on logistics, although humanitarian organizations had no control over this.

In Tanzania the study of Mwangoka (2017) made an assessment of floods and their management practices in Songwe River Catchment. The study results show that the villages of Kabanga and Ndwanga in Kyela District are affected by floods of different frequencies every year, latrines were flooded which led to an outbreak of waterborne diseases. The study recommends for implementation of flood prediction practices, flood policy, and flood fight education. In similar case, Marwa (2016) aimed to identify the factors that international organizations in Tanzania should consider while implementing supply chain management methods. The study suggests that managers of humanitarian organizations hire and continuously train SCM staff on how to improve the efficiency of procurement functions, hire competent staff with knowledge and skills on SCM functions, and continually train employees on professional ethics in order to increase the level of human capital efficiency for supply chain management.

A study by Chingono and Mbohwa (2016) revealed that IT use in humanitarian logistics and supply chain management separated into coordination in delivery, collaboration, transaction processing and supply chain planning but fail to examined the effect of funds, RM and resources in humanitarian logistics and supply chain management. Thus, insufficient funds, distortion of information and development partners procedures and policies still were the problems.

Research objective

The main objective of this study is to assess the determinants of government humanitarian supply chain practices in managing floods in Ilala Municipal, Dar Es Salaam. The study helps to mitigate flood by using of allocated funds, Legal and regulatory framework, human resource and infrastructure on humanitarian supply chain practice in managing floods.

Theoretical Framework

In this study, the theory which was used to underpin the study was the Resources-Based View (RBV) which was described by Barney (1991). The theory is based on the availability of

resources in achieve organizational aims. According to this theory, there are two categories of resources in organization which are visible resources and invisible resources. In the viewpoint, the theory argue that each business entity needs a unique set of resources in order to gain competitive edge in the market by responding quickly to the changing market situation (Chogo, 2018). Humanitarian organizations in association with government of the particular country has spared much effort in humanitarian supply chain practices to enhance sustainable performance of the in managing floods. However, Humanitarian supply chain practices would not become effective in the absence of the resources that lead to reduce the number of death (Endale, 2016).

In that regard, this theory is very significant in this study as it entails why resources are necessary to support humanitarian supply chain management effectively and efficiently, for example, for the visible resources, when linking to the study, there is fund and staff while for the invisible resources there are employees' skills and knowledge. Usually, resource-based theory corresponds to this study on the point that since the study involves effect of allocate fund in humanitarian supply chain practices in managing floods, hence factors such as human resources, financial resources (funds), are necessary.

Methodology

Data

The study employed a cross-sectional design involving a quantitative approach to answer research questions. A researcher preferred to use this design because it allowed researcher to gather information about different characteristics at one specific point in short period of time. The study was carried out in Ilala Municipal Council. This area has been selected because it is one of the areas which has been hit by floods and leave their residents especially Jangwani and Vingunguti.

The targeted population consisted of 124,593 households in the Ilala District, as drawn from the targeted population below according to the 2012 population and housing Census report. The sample size of the study consisted of 100 respondents who are the residents of Vingunguti and Jangwani. From the intended population of residents of Vingunguti and Jangwani wards, the

sample size was determined based on Yamane's formula (1967) which states that at the significance level of 90%, the minimum sample size is 100.

$$n = \frac{N}{(1 + Ne^2)} \dots\dots\dots (1)$$

Whereby; N is the total population (124,593)

n is the sample size

e is error term (0.1)

The result from Table 1. indicates the sample size derived from the total population.

Table 1: Sample size distribution of the study

No.	Wards	Population Available	Distribution	Sample Selected
1.	Jangwani	17,647	100/124,593x17,647= 14.1	14
2.	Vingunguti	106,946	100/124,593/106,946=86.8	86
	Total	124,593		100

Source: NTC (2012)

The study applied multi-stage sampling technique where for the first line Jangwani and Vingunguti were purposive selected based on high rate of occurrence of floods (IFRC, 2019).

According to Kumar (2011) stratified sampling technique is a probability sampling technique used to stratify the population in a way that entire population in the stratum is homogeneous. In this study to select respondents from each ward, proportionate stratified sampling techniques as shows in the Table.1 was adopted, which was followed by simple random selection of respondents for each stratum and Simple random sampling technique was appropriate since the list of households affected by floods were obtained from the street's leaders for each ward.

Analytical Model

The study use 100 questionnaires were distributed to the respondents. A pilot test was conducted to determine whether the questionnaires were appropriate for the respondents. The researcher visited the respondents and filled out surveys both personally and with the assistance of a field assistant. This was crucial since it was designed to help respondents, particularly those with low reading levels, in order to raise the response rate. The use of questionnaires was allowed researcher collect data from a big sample in a short amount of time and in a low cost compared to other methods. Further, this facilitated easier coding and analysis of data collected. The information collected through questionnaires reflected the research objectives.

Earlier quantitative data analysis the data was cleaning and identify the missing the data order to sort out useful from non-useful. The clear data were processed by coded and later entered data into software Statistical Package for Social Science (SPSS) and Microsoft Excel as analytical tools (software) of data analysis.

In order to study the relationship between the dependent variable and independent variables, the multiple linear regression model was used. According to (Cooper & Schindler, 2003) when a study's continuous dependent variable was expected to be a function of another two or more independent variables, this model is typically used. The following form of multiple linear regression model was adopted; -

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \dots\dots\dots (2)$$

Y = Managing Flood

β_0 = Constant factor

X_1 = Budget.

X_2 = Time

X_3 = Received fund

Findings and Discussion

Reliability Test

In order to determine if the components are consistent with one another and hence form a single construct, Cronbach's Alpha was utilized (Amin, 2005). A Cronbach's Alpha was utilized to assess the internal consistency of the variables in order to evaluate the dependability of the scale from each one (items). The reliability indicator known as Cronbach's Alpha makes the supposition that all items and queries are equally dependable. In all indicators, the required value should not be less than 0.7. The minimum value for the alpha coefficient is utilized as the cutoff criterion, which is 0.7.

Table 2: Reliability test

Variable	Number of Item	Cronbach's Alpha Coefficients
Allocated fund	5	0.794
Legal and regulatory framework.	5	0.885
staff and experts	5	0.859
Infrastructures.	5	0.893
Flood managing	5	0.940

The result in the Table 2 above indicates that all alpha -value are greater than threshold 0.7, therefore, the study variables are consistency to explain the subject matter.

Sample Characteristics

Sex of respondents

Table 3 above shows that both male and female are participants in responding questions where; 75.28% represents male respondents and 24.72%, represent female respondents. The findings implies that there was better gender involvement in the study. Thus, the study was free from gender bias and inferences were derived from both genders

Age of respondents

Table 3, the result showed that 46(51.69 %) represent age group between 31-45 having higher rate in relation to other group, 24(26.97%) of respondents were in the age range between 46-55, 17(19.4%) of the respondents were in the age group ranging between 20-30 years, and 2(2.25%)

were in the age group of 55 and above. The finding implies that age group of 31-45 is considered to have large number of respondents as compared to other groups that they are matured enough to answer the questions provided. Aziz (2016), argued that the age group range from 30 to 50 is considered important because they are very experienced than the other age group, on the other hand, the age above 50 is regarded as being less productive and with lower motivation to work due to their impending retirement.

Table 3: Sample Characteristics (n=89)

Gender	Frequency	(%)
Male	67	75.28
Female	22	24.72
Age	Frequency	(%)
20-30 years	17	19.10
31-35 years	46	51.69
46-55 years	24	26.97
Above 55 years	2	2.25
Level of education	Frequency	(%)
Primary level	16	17.98
Secondary level	9	10.11
Certificate level	8	8.99
Diploma level	8	8.99
Degree level	48	53.93

Level of Education

The findings in Table 3 above on the academic level of respondents displays that the high percentage is composed of the respondent of degree holders, that is 48(53.93%) while for diploma is 8(8.99%), certificate is 8(8.99%), secondary is 9(10.11%) and respondents of primary

level of education are 16(17.98%). This means that many of the respondents are degree holders and thus could be able to capture and understand questions related to the research objectives.

Multiple liner regression result

Results in the Table 4 indicates the adjusted R-square of 0.7898 implying allocation of fund on humanitarian supply chain practice in managing floods by 78.98%. This is also supported by Mwangi (2020) who claimed that allocation of fund is vital in enhancing humanitarian supply chain practice. In the similar case, the study findings are supported with resource-based theory which puts emphasis on the importance of resources at large.

Table:4 Regression results for allocation of fund (n=89)

Variable	Coefficient	Std. errs.	t	p-value
Constant	.3120007	.2319659	1.35	0.182
Adequate of fund	.0314333	.0340909	0.92	0.359
Concerning of government	.0450655	.0650662	0.69	0.490
Practice of budget	.4231898	.0664237	6.37	0.000
Presence of good rationale	.3138549	.0743151	4.22	0.000
Time release of fund	.0769745	.0722873	1.06	0.290

R=0.8953, R-square=0.8017, Adj R-square=0.7898, F (5,83) = 67.12, p-value=0.001.

Furthermore, Regarding the practice of budget planning the result in Table 4 indicates that practice of budget planning was positive and significant effect on humanitarian supply chain practice by 42.3% ($p=0.000$). The findings imply that by monitoring practice of budget planning will help to proper allocation of fund on humanitarian's supply chain practices. The study findings are supported by Marwa (2016), who claimed that budget planning for the implementation of supply chain operations is required so as to determine the funds required to

enhance such operations. Also, presence of good rationale has positive significant on humanitarian supply chain practice in managing flood by 31.4% ($p=0.000$). The findings imply that by monitoring practice of budget planning and presence of rationale will help proper allocation of fund on humanitarian's supply chain practices. The findings are supported by Mwangi (2020), who revealed that having a proper allocation of funds would enhance effective supply chain operations, and this is due to the fact that supply chain operations require adequate funds to ensure such operations.

Adequacy of Fund

Adequacy of fund in managing flood is shown in Table 4 and indicates that adequacy of fund was significant impact on humanitarian supply chain practice by 31.4% ($p=0.359$). This implies that the government is proactive in disaster management, thus empowering supply chain operations during disaster management and also, implies that the majority of respondents agreed that there was adequate funding for the facility that led to effective supply chain operations. This is also agreed with the study by Beyene (2018) revived that adequacy of donor funding and government fund identified as major factors for external forces that predict humanitarian logistics performance significantly.

Concern of the Government

The finding indicated in the Table 4 shows that, concern of the government on managing flood was significant effect on humanitarian supply chain practices by 45.0% ($p=0.490$). This imply that the government sets the budget to handle humanitarian's emergency during disasters. This is supported by Kaluki (2015) that timely fund should be allocated and released for humanitarian supply chain management since fund enables proper practice of supply chain management particularly in service delivery to the humanitarian organizations.

Practice of Budget

Regarding the practice of budget planning the result in Table 4 indicates that practice of budget planning was positive and significant effect on humanitarian supply chain practice by 42.3% ($p=0.000$). The findings imply that by monitoring practice of budget planning will help to proper allocation of fund on humanitarian's supply chain practices. The study findings are supported by

Marwa (2016), who claimed that budget planning for the implementation of supply chain operations is required so as to determine the funds required to enhance such operations.

Presence of Good Rationale

Also, presence of good rationale has positive significant on humanitarian supply chain practice in managing flood by 31.4% ($p=0.000$). The findings imply that by monitoring practice of budget planning and presence of rationale will help proper allocation of fund on humanitarian's supply chain practices as indicated in Table 2. The findings are supported by Mwangi (2020), who revealed that having a proper allocation of funds would enhance effective supply chain operations, and this is due to the fact that supply chain operations require adequate funds to ensure such operations.

Timely Release of Fund

However, the result in Table 4 indicate that timely release of funds during implementation of supply chain operations increased its effectiveness in managing floods, the result show that have significant effect by 76.6% ($p= 0.290$) imply that since funds were released on time to support disaster management supply chain operations will be effectiveness in managing floods has increased. This is also agreed with the study by Kassahun (2018), who claimed that having timely release of fund would render to enhance humanitarian supply chain management at large.

Conclusions, Implications and Recommendations

Conclusion

The study concludes that more than half of the participants affirm that proactive practice is essential in managing the disaster. Whereas, through funds allocation and availability of disaster management guidelines, monitoring and implementation help to control and minimize the magnitude of the disaster, particularly floods.

From the findings, the study conclude that allocate of fund has positive and significant effects on humanitarian Supply chain practice in managing flood in Ilala Municipal. The study also concludes that there is strong positive relationship between allocated of fund and performances in managing flood. adequate of fund, concerning of government, practice of budget, presence of

good rationale and time release of fund has significantly effect on humanitarian supply chain practice in managing floods Dar Es Salaam region. Therefore, proper allocated of fund, meeting budget, comply with donors' conditions enhance the successful of managing flood to a great extent.

Implication of the Study

The practice of humanitarian supply chain needs various resources to ensure that the intended goals are well achieved. In that regard, resource-based view is necessary to explain this implication due to the fact that it puts emphasis for an organization to ensure it has both tangible and intangible resources to achieve its goals. In that case, there are two categories of resources in organization which are visible resources and invisible resources. The visible resources can be seen and one of these visible resources are man power, financial resources and other working facilities. For the case of invisible resources, these are knowledge, skills, experience and ability to perform certain duties and the implication of the methodological aspects used in this study is based on the fact that, it enabled the researcher to accomplish what was intended to accomplish in the study.

Recommendations

Timely fund allocation is essential for disaster preparedness. Therefore, for successful disaster management particularly flood which is common in most of communities in Tanzania the Ministry of Planning and Finance should ensure that there is sufficient budget to support humanitarian supply chain practices. Also, the Ministry should establish new sources of revenue like donors and work closely with PMO-DMD in order to resolve the issue of budget planning and timely release of fund

Also, most of Tanzanians are not aware of disasters vulnerability in their localities. The government should undertake special program on educating its citizens on how vulnerable they are and what they should do in case disaster occurs. Therefore, the study recommends the following studies to be taken on role of stakeholders in enhancing human supply chain practice

Acknowledgements

The authors are grateful to the anonymous referees of the journal for their extremely useful suggestions to improve the quality of the article. The authors also are thankful to the management of the College of Business Education (CBE) whereas this manuscript emanated from the Dissertation of Masters of Procurement and Supply Chain Management. Usual disclaimers apply. The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article. The authors received no financial support for the research, authorship and/or publication of this article.

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The Influence of Public Procurement Auditing on Procurement Performance: A Case of The University of Dodoma (UDOM)

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Abstract

Public audit Act No 11 of 2008 under section 28 require the Controller and Auditor General to carry out Performance Audit (Value for Money Audit) for aim of establishing the economy, efficient and effectiveness of any expenditure or use of resource in government entities. But despite its aim, the difference authors have highlighted challenges of public procurement audit on procurement performance, and yet there has not been enough highlighted contribution of procurement auditing as a factor on enhancing procurement performance of public entities. Thus, the study aims to determine the influence of public procurement auditing on procurement performance at the University of Dodoma as the case study. The study followed positivism philosophy, where by a cross section research design was employed and both qualitative and quantitative approaches were used. A sample size of 100 was selected and purposive and simple random sampling techniques were employed. The study used questionnaire and interview guide as a data collection tool. Data analysis involved the use of IBM SPSS version 25 to run descriptive and regression analysis. Result reveal that procurement audit through having expertise procurement auditors, effectiveness on audit quality and compliance to Audit Principles during procurement auditing assignment contribute significant influence of procurement performance of the public procuring entities. The recommendation made on auditing procurement process rather than auditing final result, would be much practical if consistence of availability of fund for particular audit assignment and continuity of audited project/procurement

as per work schedule exist. The recommendation on assuring frequent training to procurement officer and other procurement practitioners for improving procurement performance of institutions, its applicable only if Institutions have strong financial capabilities to fund those frequent training.

Keywords: *Public Procurement Auditing; Procurement Performance*

Introduction

Procurement audit is a methodical, comprehensive and independent investigation or evaluation of the procurement activities. A procurement audit is a function responsible for auditing the purchase or acquisition of the company. What they cover and how they carried out (McCoy, 2010). From 31st January 2008 a new regime introduced to regulate public procurement regime in Bangladesh. Though the new regime was expected to bring about significant changes in line with the objectives establishing transparency and accountability in the procurement using public funds, giving equitable treatment and ensuring free and fair competition, the perception of procuring entities and general public is not satisfactory. Auditing procurement activities is one of the ways to judge actually what happens to that huge spending (Lukman, 2016).

According to the Ghana Audit Service (2014), public procurement audits are intended to determine whether proper procedures have been followed, records have been properly maintained, and that the entity's procurement activities are carried out within the budgetary limits established by Parliament. The Audit service is also expected to ascertain whether internal control procedures established by public entities are satisfactory and strong enough to protect public resources and ensure efficiency and effectiveness of operations (Etse& Maxwell, 2014).

Despite of the audit carried out by Controller and Auditor General (CAG) and Public Procurement Regulatory Authority (PPRA) each year, there still different challenges towards procurement performance of many procuring entities in Tanzania, for example according to Annual Performance Evaluation Report (APER) for a 2020/21, reveal that five (5) out of eighty-five (85) audited procuring entities, equivalent to 5.9 percent were assessed to have a poor compliance level (below 60%), which caused by weak adherence to Public Procurement Act (PPA) and Public Procurement Regulation (PPR), to the extent that immediate intervention and corrective efforts are needed to address the identified capacity gaps. Furthermore, in reviewed

procurement procedures and management of contracts, noted several weaknesses such as inappropriate use of procurement methods for awarded tenders in Sokoine University of Agriculture (SUA), execution of projects without conducting environment impact assessment in Institute of Financial Management (IFM) and delays in execution and completion of awarded tenders (CAG 2021).

This is a contrary to the fact that, efficiency encompasses the performance of the procurement procedure are cost effectively as possible and in a timely manner. Procurement audit evaluates the performance of the procurement department by observing into quality delivery, savings made from procurement process, cost reduction, lead time management and the general impact of the department in relation to the organization performance. This supports the procurement department and the entire organization to note the gaps, developments of available opportunities, also procurement audit promotes consistency where application of the procurement process should be the same through the organization (Thai, 2016).

Procurement audits sought to determine whether Procuring entities in the implementation of their responsibilities, struggle to achieve the maximum standard of equity, bearing in mind principles of equality of opportunities to all tenderers, fairness of treatment to all parties and need to attain the best value for money in terms of price, quality, and delivery having regard to the sated specification and criteria. Also, procedures, processes and documentations for procurement and contracting agreed with the provisions of PPA and PPR to achieved the expected economy of the country. Public procurement accounts for about 70 percent of the complete government expenditure budget per year, enough to finance the combined annual recurrent budgets of the ministries (APER, 2011). Therefore, need for enhancing the transparency of the procurement system cannot be overemphasized towards achievement of better procurement performance.

Research Problem

Procurement performance are affected by difference factors such as, Poor documentation and inappropriate record keeping, habitual destruction of public procurement laws and regulations, ineffectiveness of procurement audit personnel, and inadequate supply of resources for the audit function are the challenges of effective performance of public procurement audit (Etse& Maxwell, 2014). Moreover, Rahman (2015) describes the most significant barriers to procurement auditing which are a lack of strategic planning, a lack of adequate audit evidence, a

shortage of competent personnel, a delay in the release of audit reports, a bad audit report presentation, ineffective monitoring and follow-up, and weak management.

Baha (2020) found that, lack of professional skills, lack of continuous training and individual auditor's experiences affect compliance in procurement auditing. Also, low level of auditor's integrity in auditing, and lack of independence lead to non-compliance with procurement auditing as a result of misstatements in the audit reports of auditors, these affects procurement performance of organizational.

Various authors have established factors influences procurement performance. For example, Mrope (2017) find that procurement performance in procuring entities is outcome of extent of procurement officials and adherence to procurement professionalism on their decision. Also, Ismail and Changelima (2019) revealed networking skills and leadership skills are key determinant of good performance of procurement management units of Tanzania towards cost reduction, on time delivery and compliance of rules and regulations. Hence, the role of procurement auditing remains under researched.

In this case, procurement auditing may be a feasible solution for enhancing procurement performance of organizations by increasing understanding of benefit of audits and increasing audit scope for enlightening the audits systems, reduce corruption and guarantee accountability (Francesco and Edwin 2018). Also, PPA (2013) and PPR (2013) as amended 2016 requires procuring entities to be accountable for the efficient administration of any contracts for the supply of products, works, and services in order to guarantee the prompt delivery of such goods, services, and completion of said works

Despite the fact that, difference authors have highlighted challenges of public procurement audit on procurement performance, yet there has not been enough highlighted contribution of procurement auditing as a factor on enhancing procurement performance of public entities. This can be attributed through the effect of expertise of procurement auditors, procurement audit quality and procurement audit principles towards procurement performance. On this ground, researcher intends to examine influence of public procurement auditing in achieving procurement performance of organization

Procurement auditing in Procurement Performance

According to Megil (2018), explain procurement audit as a project management procedure that evaluates various contracts as well as the contracting process to establish the thoroughness, effectiveness, and accuracy of the procurement process. Procurement audit reviews the procurement process so as to diminish fraud in addition to offering suggestion for improvements. Procurement audit can alternatively be described as the process of determining if stated public procurement requirements have been met and anticipated public procurement results have been or would be realized (Etse& Maxwell, 2014).

Procurement performance is the result of purchasing effectiveness and efficiency as indicated by Venkatesh et al. (2003). Shitseswa et al. (2017) explain that, Performance gives the basis for evaluating how well public entities are doing in achieving predetermined goals and decides on future efforts with the intention of commencing performance improvements.

According to PPA (2011) require Public Procurement Regulatory Authority (PPRA) to submit an Annual Performance Evaluation Report to Ministry of Finance, who then submit to National Assembly for Public Consumption to show at what extent procuring entities performance its procurement on a particular financial year.

Methodology

A cross section research design was used to guide this study, thus, because the design it allows the researcher to describe what is happening at the present moment and participants are chosen based on specific variables of interest. The study followed positivism philosophy, where by a cross section research design was employed and both qualitative and quantitative approaches were used. The researcher was able to gather 90 completed ones out of 95 questionnaires, yielding a response rate of 94.7%. Five incomplete questionnaires, or 5.3% of the total, were returned after the deadline but were discarded for further examination. Additionally, a researcher conducted interviews with 4 of the 5 managed interviewees, yielding an 80% response rate. Data was analysed using Statistical Package for Social Science (SPSS) version 25 for quantitative paradigm.

Reliability Test

According to Griethuijsen et al. (2014), Test results using Cronbach alpha reliability coefficient get more results more than 0.7, matches all at dimensions of the measured variables, it means that the instrument proved to have acceptable reliability. In this study reliability results are presented in Table 1.

Table 1: Results of Reliability Test

Variable	Alpha Coefficient (α)	Remarks
Audit Expertise		Reliable
Skills	0.763	
Training	0.712	
Knowledge	0.858	
Audit Quality		Reliable
Skepticism	0.769	
Standards Compliance	0.743	
Working Conditions	0.752	
Audit Duration	0.737	
Quality Control	0.843	
Auditing Principles		Reliable
Integrity	0.776	
Independence	0.848	
Confidentiality	0.749	
Accountability	0.729	
Procurement Performance		Reliable
Value For Money	0.911	
Professionalism	0.795	
Fraud Detection	0.836	

Source: Primary Data

Findings and Discussion

This section is concerned with evaluating the variations between the identifying approaches, drivers and processes used by procurement auditors to manage the dimensions of procurement

audit (Auditor Expertise, Audit Quality, and Audit Principles) when related with Procurement Performance dimensions (Value For Money, Professionalism and Fraud Detection). Since the purpose of the study is to gain further insight into the relationship between procurement auditing on procurement performance; thus the nature of the study mainly supports the quantitative data analysis is used. Whereby, Correlation analysis was applied to understand the nature, direction and significance of the relationship of the study variables.

Effects of Auditor Expertise on Procurement Performance

In this study, Multiple Linear Regression was used to explain the relationship between dependent with independent variables. Table 2 revealed the model summary of multiple regression analysis of effects of Expertise on Procurement Performance. As shown in Table 2 below, the coefficient of determination, R^2 was found to be at 0.590. It is therefore can be interpreted as 59.0% of variation of Procurement Performance was described by independent variables, namely Skills, Training, Knowledge. Even after taking into account the number of predictor variables in the model, the adjusted value of coefficient of determination was found to be at 0.562, giving an indication that 56.2% of the variation of Procurement Performance was described by independent variables based on the adjusted number of independent variables used.

Table 2: Results of Regression Analysis of Role on Auditor Expertise

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of Estimate
1	0.768 ^a	0.590	0.562	0.003

a. Predictors (Constant), Skills, Training, Knowledge

Source: Field data (2022)

Based results presented on Table 2, of the Beta (β) in standardized coefficients, Trainings was the highest with the value of 0.465. This would mean that among all three variables of Expertise, Training is the most significant dimension that would affect variation of Procurement Performance of Auditor. Training of Auditors is trailed by Skills with Beta value of 0.346, while Knowledge has a Beta value of 0.205. Study findings on Table 2 and Table 3 are consistent with those by Luckman (2016) and Cheng, *et al.* (2009) who recommended that: in order to have an

operative procurement, auditing must increase auditor abilities by good training, skills, training, knowledge, for field audit.

Table 3: Effects of Audit Expertise on Procurement Performance

Coefficients ^a							
Model		Unstandardised		Standardised Coefficients		t	Sign.
		Coefficients					
		B	Standard Error	Beta			
1	(Constant)	0.936	0.265			3.527	0.001
	Skills	0.302	0.074	0.346		4.098	0.000
	Training	0.235	0.078	0.465		3.008	0.003
	Knowledge	0.198	0.075	0.205		2.629	0.010
a.	Dependent Variable: Procurement performance						

Source: Field data (2022)

In addition, the findings are related with those of Rahman (2015) and Cooper, et al. (2006), who complains about factors that prevent procurement auditing, including a lack of training, skills, training, knowledge, which causes weak follow-up of audit recommendation by management of the most procuring entities. So, the vice versa of stated statement will lead to the improvement of procurement performance.

Influence of Audit Quality on Procurement Performance

The regression model summary, a key output of the regression analysis, was useful in explaining the usefulness of the model in predicting effects of Audit Quality on Procurement Performance. Correlation analysis was conducted to determine the relationship of Audit Quality components (i.e. Skepticism, standards compliance; working conditions, audit duration and quality control) and Procurement Performance. Table 3 presents the regression model summary whereby R^2 or the coefficient of determination indicates that proportion of variance of Audit Quality on Procurement Performance is 54.3%. Furthermore, study findings exposed in Table 3 on regression model summary indicated that Beta value is 0.737, thus Audit Quality is significantly and positively linked with Procurement Performance.

Table 3: Results of Regression Analysis of Influence of Audit Quality on Procurement Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of Estimate
1	0.737 ^a	0.543	0.538	0.0017

a. Predictors (Constant), Skepticism, Standards Compliance; Working Conditions, Audit Duration; Quality Control

Source: Field data (2022)

Multiple Linear Regression presented on Table 3, revealed study results which are statistically significant positive linear relationship between Audit Quality on Procurement Performance (Skepticism, Standards Compliance; Working Conditions, Audit Duration and Quality Control) and Procurement Performance while Quality Control has the highest with the value of 0.648 (p -value = 0.006).

Table 4: Influence of Audit Quality on Procurement Performance

Coefficients ^a					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sign.
	B	Standard Error	Beta		
(Constant)	0.61	0.012		2.40	0.00
1	4			1	4
Skepticism	0.59	0.034	0.546	3.02	0.00
	5			1	2
Standards Compliance	0.63	0.021	0.612	3.04	0.02
	2			6	1
Working Conditions	0.53	0.042	0.499	2.21	0.00

	2			2	1
Audit Duration	0.58	0.037	501	2.40	0.00
	1			4	9
Quality Control	0.64	0.026	0.495	2.61	0.00
	8			0	6

a. Dependent Variable: Procurement Performance

Source: Field data (2022)

The regression results of Table 4 showed that Audit Quality had explanatory power on Audit Quality in terms of Standards Compliance on Procurement Performance in that it accounted for 63.2% percent of its variability, Skepticism has contribution of 59.5%, Audit Duration has a donation of 58.1%, Working Conditions contribute 53.2%. This shows that the contribution of Audit Quality to Procurement Performance is relatively high. From Table 3 and Table 4, findings are supported by Anin, *et al.* (2022), Elewa and El-Haddad (2019) and Samelson, *et al.* (2006) who argued that audit quality has a vital role in strengthening confidence, through the proxies of effective monitoring mechanism that assures procurement processes are free of material misstatements. Further, the findings of Cuong and Dung (2019) stressed that determinants affecting audit quality includes Skepticism, Standards Compliance; Working Conditions, Audit Duration and Quality Control.

Extent of Auditing Principles on Procurement Performance

In this study, Table 5 revealed the model summary of multiple regression analysis of Extent of Auditing Principles on Procurement Performance. As shown in Table 5, the coefficient of determination, the R square is 0.637 which means a 63.7% of changeability of Procurement Performance is explained by Auditing Principles was described by Integrity, Independence, Confidentiality and Accountability. When subjected to the adjusted value of coefficient of determination was found to be at 0.629, giving an indication that 62.9% of the variation of Procurement Performance was described by independent variables based on the adjusted number of independent variables used, thus the goodness of fit measurement of the model.

Table 5: Regression Analysis of Extent of Auditing Principles on Procurement Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of Estimate
1	0.798 ^a	0.637	0.629	0.0012
b. Predictors (Constant), Integrity, Independence, Confidentiality; Accountability				

Source: Field data (2022)

Results presented on Table 6, of the Beta (β) in standardized coefficients, Independence was the highest with the value of 0.845. This is followed by Integrity at Beta value of 0.688, Accountability (0.684) and Confidentiality (0.676). This would mean that among all four identified variables of Auditing Principles in terms of Integrity, Independence, Confidentiality and Accountability are the most significant dimensions that would affect variation of Procurement Performance of Auditor.

Table 6: Extent of Procurement Auditing Principles on Procurement Performance

Coefficients ^a					
Model	Unstandardised		Standardised	t	Sign.
	Coefficients		Coefficients		
	B	Standard Error	Beta		
1 (Constant)	0.714	0.054		4.37	.002
Integrity	0.688	0.009	0.629	4.13	.001
Independence	0.845	0.015	0.561	4.80	.004

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Confidentiality	0.676	0.003	0.786	3.76	.003
				7	
Accountability	0.684	0.006	0.648	4.08	.002
				8	

a. Dependent Variable: Dependent Variable: Procurement performance

Source: Field data (2022)

In Table 5 and Table 6 findings are consistent with those by Keith and Aquinas (2015) and Mahmoodi and Hanifeh (2014) who fervently urges that Audit Principles can be source of relieving the auditors of procedural pressure and granting access to evidence, which will impact the contribution of Audit Principles on Procurement Performance. Thus, oversight in auditing can reflect the level of frauds and errors in Audit Principles on Procurement Performance. On that manner, process of audit in procurement should be Integrity, Independence, Confidentiality and Accountability to influence Audit Principles in Procurement Performance.

Furthermore, the findings are in line with narration of Petraşcu and Tieanu (2014) and Ramamoorti (2003) who addressed purpose of procurement audits was to ascertain whether procuring entities strive for prevention of fraud and error prevention, taking into account audit principles while taking the stated specification and criteria into consideration. The attributes and responsibilities of auditor concerning fraud and error prevention within an organisation will always be more receptive to the creation of structured and credible systems that need Integrity, Independence, Confidentiality and Accountability as Auditing Principles.

Study Conclusion, Recommendations, Limitation and Areas for Further Studies

Conclusion

Procurement performance is important for organization goals' achievement, as that reasons its performance need to be improved. Despite its importance, the difference reports have presented malpractices that affect procurement performance. In this case, procurement auditing may be a feasible solution for enhancing procurement performance of organizations by increasing understanding of benefit of audits and increasing audit scope for enlightening the audits systems, reduce corruption and guarantee *audit expertise, audit quality and audit principles*. The study used multivariate regression analysis to assess influence of public procurement auditing on

procurement performance. Findings from the regression analysis show that procurement audit through having expertise procurement auditors, effectiveness on audit quality and compliance to Audit Principles during procurement auditing assignment contribute significant influence of procurement performance of the public procuring entities.

Recommendations

The study recommends that; Public Procurement Regulatory Authority, Internal auditor general and Controller and Auditor General should emphasize on auditing procurement process when carried rather than auditing final result also procurement officers should strive to achieve better experience of procurement practices and must possess appropriate skills and knowledge regarding procurement cycle. This will help to eliminate or reduce loss that could happen in a particular procurement process.

Limitations and Areas for Further Studies

The study was carried out to determine influence of public procurement auditing on procurement performance. Researcher recommends areas for further studies to be conducted on “Assessment of existing model of conducting procurement audit toward better procurement performance”. Be on mind that a very little has been undertaken to assess existing model of conduct procurement audit in Tanzania. The researcher believes that when several studies regarding the current model of conducting procurement audit conducted, researchers will come up with very strong recommendation on harmonization of existing procurement audit model towards efficient and effectives model of conducting procurement audit in Tanzania.

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**The Contribution of Green Procurement Practices on Sustainable
Environmental Management in Private Sector: A Case of Tanzania
LAFARGEHOLCIM Cement**

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Abstract

Most of the companies have been hesitating to implement green procurement in most of the private sector-based companies in Tanzania. In that respect, this study assessed contribution of green procurement practices on sustainable environmental management in private sector. This study was carried out at Lafargeholcim Cement Company in Mbeya using a case study design with mixed methods. A total of 75 respondents were involved in this study they were selected using convenient sampling. Data were collected using questionnaire and interview guide whereby quantitative data were analyzed using linear multiple regression method while qualitative data were analyzed by using content analysis method. Result obtained shows that supplier certification as one of the green procurement practices contributes to sustainable environmental management. The study concludes that business organizations should adhere to green procurement practices for the sustainable environmental management. The study recommends that suppliers/producers of various materials should be certified by ISO/TBS ensuring that materials supplied are compliant and friendly to environment so that high quality materials can be provided without harming the surrounding environment.

Key words. *Green procurement, practices, Sustainable environmental management*

Introduction

Globally, Environmental issues have emerged as prominent aspects for the companies and therefore the world has grasped the opportunity brought by integrating environmental aspects into procurement processes as a means for minimizing the environmental impact resulting from the business transactions (Appolloni, 2017). Such a remarkable experienced opportunity has been parallel with the increased consumer (private and public sectors) demand of green based procuring alternatives where efficiency of resources, green gas elution and recycling have been a cornerstone for its effective implementation (Smith, 2011). The intervention of green procurement comes as the fact that procurement in any organization is a hub for connecting key players including customers, suppliers, contractors, subcontractors and service providers whom their play in the sector could have added advantage in restoring degraded environment (Rais, 2018). Ideally, green procurement entails an act of institutions procuring goods as well as services in consideration of the benefits resides in life cycle of the product and the environmental cost with an intention of attaining sustainable development through both production and consumption (Czarnecki, 2019). Practically, the green procurement assesses the substances, materials and chemicals employed in the services and products on offer (Theyel, 2020). In that aspect, green procurement is essential based on belief that procuring entities as important stakeholders and beneficiaries of the value-based output to emanate from the economy, environment and society in large (Bobis and Staniszewski, 2019).

In Tanzania environmental concern gained momentum in 1990's and the awareness regarding environmental issues started to grab attention in Tanzania with simultaneous formulation of National environmental policy (NEP) in 1997. Currently, based on Millennium Development Goals (MDGs) 2025, Tanzania through its environment policy framework has concentrated on minimizing the negative environmental impact as implementation of green procurement being prioritized for that effect. Such requirement made most of the governments to place favorable lawful environment for procuring entities to practice green procurement for the environmental wellbeing of their nations. Although the government has undertaken an effort by establishing policies that have led into substantial improvement in environmental management, on part of private sector a little is known on the contribution of green procurement practices on sustainable

environmental management. Therefore, this study tries to address this gap in knowledge by examining the contribution of green procurement practices on sustainable environmental management by focusing on private sector.

Literature Review

Theoretical Literature Review

This study has employed Agency theory developed by Jensen and Mackling (1976) to assess green procurement practices on sustainable environmental management in private sector. Agency theory establishes a relationship between organizational and legal issues with the aim of reducing occurrence of irregularities and encouraging compliance with legal and regulatory issues. Therefore, the Agency theory is so relevant to public procurement functions like what this study tries to establish as staff may have conflicting interests contrary to laid down procedures like compliance to green procurement as stipulated in the Public Procurement Policy of 2009. The benefit of Agency theory to this study is extraordinary. The Agency theory is relevant to this study because it establishes relationship between private sector with compliance to green procurement practices including supplier certification which is also closely linked to the environmental agency being National Environment Management Council (NEMC) for the case of Tanzania.

Conceptual Framework

A pictorial representation of the relationship between dependent and independent variables

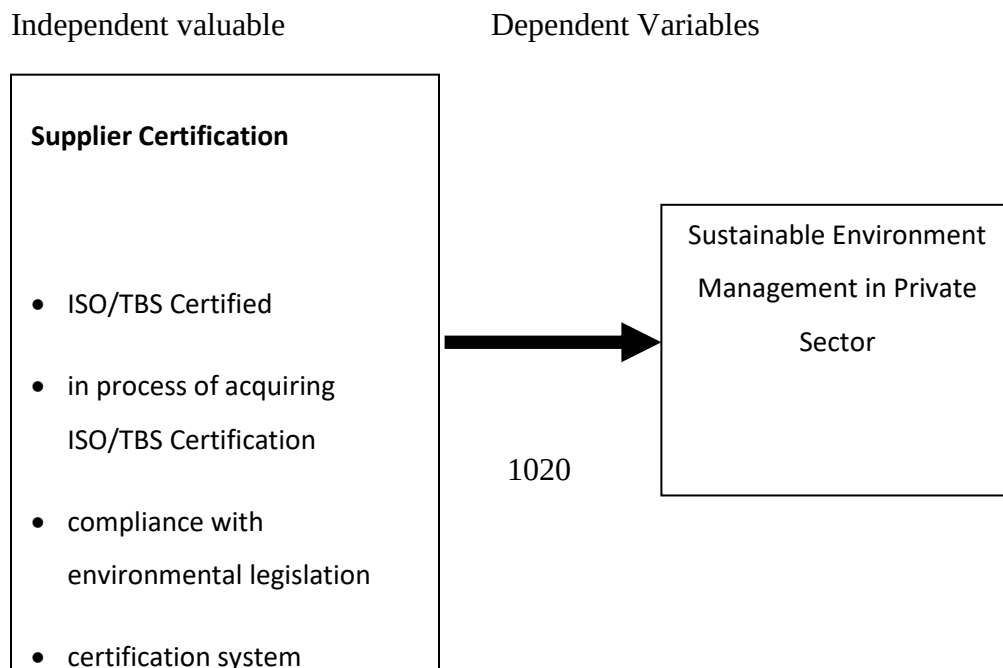


Figure 9: Conceptual Framework

Source: Developed from literature review

Research Methodology

The study was conducted at Lafargeholcim Cement Company in Mbeya. The Company has been selected to be used as the study area since according to Global Cement Staff (GCS) it has incorporated Pozzolana in the cement production which is environmentally friendly as it reduces greenhouse gas emission and therefore been an important concern for the green procurement (GCS, 2020). The population of this study comprised all staff working at Lafargeholcim Cement Company who amounted to 100 people. After using a Yamane formula, the researcher managed to get a sample size of 75 respondents including operational staff and procurement practitioners whom were supplied with questionnaires. Apart from these respondents, two key informants (management team) were involved in the interview so as to get detailed qualitative information on issues of green procurement practices in the organization. Quantitative data were analyzed by using linear multiple regression for the purpose of generating meaningful interpretation on the relationships between the variables while qualitative data were analyzed by using content analysis method as a strategy to ensure validity and reliability. Statistical Package for Social Science (SPSS) version 23 was used in the computation of data and then results were presented in form of figures and tables. Linear multiple regressions were used to rationalize the relationship between independent variables and dependent variable of the study as follows:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3$$

Y= sustainable environment management

X₁ = ISO/TBS certified

X₂ = compliant with environmentally legislation

X₃ = certification system to verify

B_0 = constant value

B_1, B_2 and B_3 = coefficients

Findings And Discussions

Respondents' Work Experience

Work Experience has been taken seriously into account in gathering information from the participants. In regard of this, the respondents were grouped into three categories of the experiences between 0-5 years, 6-10 years and more than 10 years of working experience. The result as presented in the Table 2 indicates that 57 (80.3%) respondents had 0-5 years working experience. Also 12 (35%) respondents had 6-10 years working of experience and only 2 (2.8%) respondents had working experience above 10 years.

Table 1: Work Experience of Respondents

Age Categories	Frequency	Percent
0-5 Years	57	80.3
6-10 Years	12	16.9
More than 10 Years	2	2.8
Total	71	100

Source: Field data, 2022

It was important for the study to analyze job experience helps the researcher to know which respondent has the practical knowledge on issues relating to green procurement. This study found majority (80.3%) of the respondents had 0-5 years of working experience which indicate the existence of experienced workers. In line with the findings, Kimbwereza (2016) posit that enough working experience of the staff has positive impacts in enhancing the efforts for adoption and implementation of green procurement in the organizations.

Contribution of Supplier Certification towards Sustainable Environment Management

Regarding whether the company's product is ISO/TBS certified, a Linear multiple regression tests was performed on how work experience contributed towards staff understanding on the

contribution of supplier certification towards sustainable environmental management. With such test, model fitting was also performed to test whether the study data reflected the model entities with an assumption that the significant value (P-value) is less than 0.05 then the model becomes statistical significant thus fit the data whereas whenever the P-value exceeds the significance (0.05) value then the model is not statistical significant and therefore do not fit for the data.

Table 2: Contribution of Supplier Certification towards Sustainable Environment Management

Statement	Mean	Std. Deviation	β	Std. Error	Sig.
The company's product is ISO/TBS certified	1.7183	.95891	0.023	0.072	0.041
Considering suppliers who have acquired or are in the process of acquiring ISO 14000/TBS Certification	2.3662	1.12427	0.010	0.052	0.022
The company purchases materials or parts from suppliers who are compliant with environmentally related legislation	2.0704	.91533	0.197	0.070	0.006
The company uses certification system to verify the compliance to					

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environmental friendliness of the produced cement	2.6056	.93318	0.069	0.066	0.011

The study findings as shown in Table 1 indicate that The study findings established significant relationship based on work experience as revealed in the statements namely “the company’s product is ISO/TBS certified” of which the P value was at 0.041 significance. On further note, regarding the statement “the company purchases materials or parts from suppliers who are compliant with environmentally related legislation” a positive and significant relationship was established with P value of 0.022 significance. Regarding the notion that the company purchases materials or parts from suppliers who are compliant with environmentally related legislation with work experience of respondents established a statistical negative significant relationship since the P value is 0.006 which is less than significance value of 0.05. The study findings be attributed to the policy requirement towards enhancing green procurement and therefore in order for companies to comply need to do as instructed for efficiency purposes. However, regarding the statement “the company uses certification system to verify the compliance to environmental friendliness of the produced cement”, a significant relationship was obtained with P value significance at 0.011. In general, most of the tested variables in these objectives brought about positive and significant relationship existed between them.

Conclusion And Recommendations

Supplier certification contributes to sustainable environment management at Lafargeholcim Company Limited. Based on the presented findings, this study concludes that Lafargeholcim adheres to green procurement practices for the sustainable environmental management. This study recommends that, Suppliers of various materials should also team up with the government efforts in ensuring that materials supplied are compliant and friendly to environment so that high quality materials can be provided without harming the surrounding environment and Scholars should also conduct more studies regarding green procurement practices so as to impact related knowledge for the personal, firm as well as country protection from the side effect of non-green procurement practices.

Areas for Further Studies

This study assessed green procurement practices on sustainable environmental management in private sector in the context of Lafargeholcim Cement Company Limited in Tanzania. Similar study could be conducted about awareness of the side effects of non-green procurement practices in private sector where industries are highly found and therefore to have an extensive understanding about the subject matter.

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Influence of Trust on Contract Management

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Abstract

The study determined the influence of trust on contract management at the University of Dodoma. The study employed a case study research design and involved 118 participants. The data were collected using questionnaires and interview methods. Quantitative data analysis was used. Quantitative data were subjected to statistical analysis using computer-based software, Statistical Package for Social Scientists (SPSS) version 20. The findings revealed that trust has statistical significance with contract management. The multiple linear regression findings revealed that trust is significantly associated with contract management, which implies the need for improving certainty, credibility, intimacy, cooperation, certainty, shared goals, reliability and self-orientation to ensure trust in contract management. Therefore, the study recommends that the University of Dodoma have to improve degree of trust in contract management regarding the procurement process. This enhances user knowledge of what to do to ensure effective contract implementation during the procurement process. The University of Dodoma should create an environment that enables users, PMU staff and suppliers to work friendly by providing a communication platform whereby people can communicate and share information. As a result, it builds trust and shows commitment.

Keywords: Trust; Contract Management,

Introduction

Contract management refers to handling contract agreements from creation to execution, which also involves monitoring contract modification, changes and implementation (Mwakyelu, 2019). The Public Procurement Act of 2011 ensures that public procurement is fair, transparent and non-discriminatory. Also, the procurement act requires public institutions to procure works, goods, and services according to the Law (the United Republic of Tanzania, 2011). Araujo et al. (2005) and Mwakyelu (2019) reported that procurement of goods and services in public institutions face numerous challenges, including procurement cancellation of contract, influence over the procurement process and managerial interference because of a conflict of interest are just a few examples (Francis, 2013; Mwakyelu, 2019). Although the government of Tanzania has put down several procurement strategies to alleviate the problem, including developing the Public Procurement Act 2001, 2004, and 2011, the problem of abiding by public institutions' procurement procedures is still a problem (Mordecai, 2017; Mwakyelu, 2019).

Despite the fact that trust plays significant role in contract management, but little is known how it is performed towards achieving organizational goals in contract management (Mwagike, 2021). Therefore, this study established the influence of trust on contract management at the University of Dodoma.

Study Problem

Literature reports that contract management in a public institution is still a problem. For instance, it is reported that institutions' activities have come to a halt due to the delay in supplies of goods and services required to support critical functions of the institutions, which are caused by poor contract management (Mahuwi & Panga, 2020). For instance, Loice (2015) pointed out that trust, is amongst of issues that significantly affect procurement performance. Musodza (2009) indicated how buyer suppliers should work together to derive value for money. In addition, Kimario (2020) argued that the sizeable geographical distance between the actors, the lack of supplier reliability, and the procurement contract breach are the root causes of poor procurement performance in the organisations. In comparison, this empirical literature contributed valuable to understanding trust in contract management. However, these studies have focused on the buyer-supplier relationship in general and left out crucial information about the influence of trust on contract management. Therefore, this study aimed to assess the the influence of trust in the buyer-supplier relationship on contract management at the University of Dodoma.

Methodology

The study was conducted at the University of Dodoma. The study used case study design while the target population included the Procurement Management Unit (PMU), service providers and suppliers providing services and goods at the university, and users who are head of departments, units, and cost centres dealing with procurement activities in their respective units. Simple random sampling used to select the population that participated in the responding questionnaire. Also, purposive sampling has been chosen to participate in the interview session. The sample size for this study was 118 participants. From the sample size of 118 individuals, the respondents from each section (UDOM PMU staff, suppliers and Users) were proportionally distributed by using Pandey and Verma's (2008) formula as follows; $n = \frac{(n/N) n_1}{n_1}$. Whereby, n = Allocation of sample size, n =Sample size, N = population of the study and n_1 = population size of the given section.

About questionnaires were distributed to 118 respondents. The study used face-to-face interviews to collect data from the respondents. The respondents who were involved in this study include; the head of department, section or unit of the University of Dodoma and supplying organisation. These groups were selected to participate in the interview session because they are believed to be knowledgeable on the issues related to the study. Thematic analysis involved identifying patterns or themes embedded throughout research interviews by selecting the most suitable patterns for the study and including them in the report. The researcher also used coding organising the data. On the other hand, quantitative data were subjected to statistical analysis using computer-based software known as Statistical Package for Social Scientists (SPSS) version 20 and EXCEL. The binary logistic was used because the dependent variable was quantitatively measured.

Reliability Test

For testing reliability of this study, Cronbach's alpha, also referred to as coefficient alpha, was used to assess the internal consistency of the structured instrument. As per Nunnally (1978), alpha values range from 0.0 to +1.00 but Coefficient having good internal consistency if Cronbach's alpha is in the vicinity 0.7 (Wilson, Magarey & Mastersson 2008), was used to assess the internal consistency of the structured instrument. In this study, the Cronbach Alpha test results of the constructs employed to quantify the reliability of the items in the measurement tool

are shown in Table 1. This signifies that the study instrument used was reliable and suitable for data collection since all the study results were above 0.7.

Table 1: Reliability Test Results

Indicator	Cronbach's Alpha	Number of Constructs
Quality	0.823	8
Cost	0.747	6
Time	0.758	7

Source: Study Data

Results in Table 2 revealed that, on average above 77.65% of the respondents in University of Dodoma agreed the need for Trust in Contract Management. They need Certainty, Credibility, Intimacy, Cooperation, Certainty, Shared Goals, Reliability and Self-Orientation to ensure Trust in Contract Management. The results in Table 2 also revealed that 83.6% of the study respondents in University of Dodoma agree to have Shared Goals highest impact indicator of Trust in Contract Management. The results in Table 2 also indicated that 82.8% of respondents agreed that Transparency has impact on Trust in Contract Management. While 80.1% of respondents agreed that University of Dodoma needs to have Reliability as Trust in Contract Management. The results in Table 2 depicted that 80.02% of respondents like Credibility, while Intimacy is needed by 78.2% of respondents, Cooperation is agreed by 72.8% of respondents, Certainty is agreed by 72% and 70.6% respondents like Self-Orientation to be indicators of Trust on Contract Management provided by University of Dodoma. The study shows that majority of the respondents agree to Trust on Contract Management.

Table 2: Research Instrument Profile of Trust Indicators

Trust Indicators	FREQUENCIES					Mean
	1	2	3	4	5	
Certainty	2(1.69)	14(11.86)	29(24.58)	57(48.31)	16(13.56)	3.60±0.93
Credibility	0(0.00)	5(4.24)	12(10.17)	63(53.39)	38(32.20)	4.14±0.76
Transparency						
Intimacy	0(0.00)	21(17.80)	10(8.47)	46(38.98)	41(34.75)	3.91±1.07
Reliability	0(0.00)	14(11.86)	8(6.78)	54(45.76)	42(35.59)	4.05±0.95
Self-Orientation	4(3.39)	25(21.19)	19(16.10)	44(37.29)	26(22.03)	3.53±1.15
Cooperation	2(1.69)	18(15.25)	23(19.49)	53(44.92)	22(18.64)	3.64±1.01
Shared Goals	1(0.85)	4(3.39)	10(8.47)	65(55.08)	38(32.20)	4.18±0.72
Credibility	4(3.39)	10(8.47)	8(6.78)	54(45.76)	42(35.59)	4.01±0.96

NB: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

Source: Primary Data

Results and Discussion

Findings revealed in Table 3 indicated that Trust is significantly and positively linked with Quality Efficiency at University of Dodoma. This shows that after Trust is not significantly related to Quality ($\beta = 0.705$, t -value = 1.057 and p -value = 0.000).

Table 3: Results of Regression Analysis of Role on Quality Efficiency

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of Estimate
1	0.705 ^a	0.497	0.001	11.73212
b. Predictors (Constant), Trust				

Results of Correlation value ($r = 0.705$, p -value = 0.000) in Table 3 and Table 4 respectively shows that Trust is less significantly positively linked to Quality Efficiency in Contract

Management at University of Dodoma. This result demonstrates that the contribution of Trust is above average and it is positively linked to role of Quality Efficiency in Contract Management. This study finding is concur with the study findings by Uusitalo, et al., (2021) and Ahimbishibwe and Muhwezi (2015) who all confirmed that there is a strong and positive association of Trust and Quality Efficiency in procurement contracts. The study findings by Fernandez (2009) also found out that trust has an independent positive effect on overall contracting performance. In principle, the Trust in Contract Management focused on addressing the needs and desires for Quality Efficiency in Contract Management, as well as to Certainty, Credibility, Intimacy, Cooperation, Certainty, Shared Goals, Reliability and Self-Orientation to ensure Trust in Contract Management.

Table 4: Hypothesis Test on Quality Efficiency in Contract Management

Coefficients ^a					
Model		Unstandardised Coefficients		Standardised Coefficients	t
		Coefficients			Sign.
		B	Standard Error	Beta	
	(Constant)	17.186	12.578		1.606 0.15
1	Trust	0.432	0.387	0.705	1.075 0.000

a. Dependent Variable: Quality Efficiency

Table 5 revealed that Trust is significantly positively linked with role of Cost Efficiency in Contract Management at University of Dodoma. This indicates that Trust is significantly associated to role of Cost Aspect in Contract Management ($\beta = 0.819$, t-value = 1.367 and p-value = 0.000). Correlation value ($r = 0.819$, p-value = 0.000) in Tables 5 and Table 6 indicated that Trust is significantly positively connected to Cost Efficiency in Contract Management at University of Dodoma.

Table 5: Results of Regression Analysis of Role on Cost Efficiency

Model Summary				
Model	R	R Square	Adjusted R	Standard Error of

			Square	Estimate
1	0.819 ^a	0.671	0.013	6.54843
a. Predictors (Constant), Trust				

This means more improvement in Trust will help to increase Cost Efficiency in Contract Management. This result infers that the effect of trust on Cost Efficiency in Contract Management increases Certainty, Credibility, Intimacy, Cooperation, Certainty, Shared Goals, Reliability and Self-Orientation when ensuring Trust in Contract Management. The study results are not in line with study findings by Brown, et al., (2007), Jøsang, *et al.*, (2005) Dimitrakos, *et al.* (2004) who affirmed that there positive trust on the other hand is a like catalyst for Cost Efficiency as it enables public procurement practitioners to interact spontaneously and aids in smooth execution of Contract Management. In short, improvements in Trust appear to be contingent on how Cost Efficiency can aids in Contract Management.

Table 6: Hypothesis Test on Cost Efficiency in Contract Management

		Coefficients ^a				
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sign.
		B	Standard Error	Beta		
	(Constant)	13.263	12.578		2.647	0.014
1	Trust	0.456	0.278	0.819	1.586	0.000
a. Dependent Variable: Cost Efficiency						

Study findings in Table 6 revealed that there is a strong positive relationship between after Trust and Time Management at University of Dodoma. Generally, findings indicates that Trust is significantly positively interrelated to Time Management in Contract Management ($\beta = 0.795$, t -value = 0.895 and p -value = 0.000).

Table 7: Results of Regression Analysis of Role on Time Management

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of Estimate
1	0.795 ^a	0.632	0.012	5.82112
b. Predictors (Constant), Trust				

From Table 7 and Table 8, Correlation value ($r = 0.795$, p -value = 0.000) revealed that there is a very positive relationship between Trust and Time Management at University of Dodoma. This verifies that Trust at University of Dodoma is allocated and given so much attention so to enhance Certainty, Credibility, Intimacy, Cooperation, Certainty, Shared Goals, Reliability and Self-Orientation when ensuring Contract Management. Manishimwe (2020), Mchopa (2015) and Burki and Buvik (2010) acknowledged that there is a strong positive and statistically significant association between Trust and Time Management. These findings therefore are in line with the study findings of Brown, *et al.*, (2016) and Burki and Buvik (2010) that procurement contracts are time dependent and are subject to ‘the paradox of trust’ that catalyses exploitation contract management practices. In this manner, University of Dodoma should deploy strategic measures to influence Time Management as after Trust is offering significantly impact Contract Management.

Table 8: Hypothesis Test on Time Management in Contract Management

Coefficients ^a					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sign.
	B	Standard Error	Beta		
1	(Constant)	13.734	9.689	2.556	0.018
	Trust	0.548	0.376	0.795	0.00

b. Dependent Variable: Time Management

Conclusion, Recommendations, Limitations and Areas for Further Studies

Conclusion

As far as the objective is concerned, the study concludes that trust in contract management plays a central role. The multiple linear regression findings revealed that working with key suppliers and having a long-term business strategy was significantly associated with contract management. Thus, for effective contract management, organizations need to work with key suppliers and have long-term business strategies.

Recommendations

The study recommends that the University of Dodoma have to inculcate public procurement practitioners on how to improve Trust in Contract Management. This is because contract management in procurement should be practical, implying that all objectives are expected to be fulfilled. In the other hand, trust is the key to contract management; in that regard, buyer needs to trust the supplier to deliver what was agreed. Without trust, there is no business, and thus the studied organization should work on that.

Limitations and Areas for Further Studies

The limitation of this study was the issue of respondents since the targeted respondents for this study were the Procurement Management Unit (PMU), service providers and suppliers providing services and goods at the university, and users who are head of departments, units, and cost centres dealing with procurement activities in their respective units. This population was always busy with very little time to fill out the distributed questionnaire. To overcome this limitation, the researcher undertook sampling from the targeted population and ensured the sample size was enough to represent the entire population. In addition, the questionnaire was designed to be simple, straightforward, and, finally, the questionnaires were distributed through a Smartphone; this allowed the respondents to fill them out when they had time. The study collected data from respondents from the University of Dodoma and included only a sample of 128 participants.

In addition to that, this study focused on the influence of trust on contract management. The study proposes the following areas for further study;

- i. The assessment of moderating factors influencing buyer-supplier relationships on the procurement performance of public sector in Tanzania.
- ii. The role of buyer-supplier relationships in achieving economic sustainability in the country

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The Contribution of Non-Aeronautical Revenues on Improving Airport Facilities at Julius Nyerere International Airport in Dar Es Salaam, Tanzania
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Abstract

The study analyzed the contributions of non-aeronautical revenues on improving airport facilities at Julius Nyerere International Airport in Dar es salaam, Tanzania. The study used longitudinal design in which time series data from financial statements and integrated reports for the financial years 2017/18 to 2020/21 was undertaken. The Multiple linear regression models were employed in analyzing the contribution of non- aeronautical revenues on improving the airport facilities. Findings, rental fees car parking and advertisement were positively significantly contributing to the improvement of the airport facilities at Julius Nyerere International Airport. This implies that, JNIA can further increase its total revenues by expanding the scope of retail operations at the airports under its jurisdiction as additional sources of income. It is recommended that further research be undertaken to extend the scope of the study by increasing the period of analysis and by including other airport owners and operators in Tanzania

Key words: Contribution, Airport, Non- Aeronautical Revenues And Airport Facilities.

Introduction

Airports are generally considered one of the most complex systems in modern society all over the worldwide, modern airports have developed in the provision of services catering to a varied clientele beyond an air traveler and an aircraft, while still preserving their core functions of facilitating air travel. The majority of airports now have to invest in various services that cater to non-passengers in addition to their core business of handling air travel as a result of these changes if they want to improve their revenue. From the 1970s through the 1990s, this

transformation from their primary function to a variety of activities that included items that had little to do with air travel, like shopping centers, hotels, restaurants, and lot allocation for different customer service providers, take place (need sources here to justify the argument). However, some few airports had included karaoke rooms and swimming pools as sources of income, which have increased their earnings (Battal & Bakir, 2017)

In the recent years, non-aeronautical revenues (NARVs) share of airport activities has increased over time, reflecting the changing nature of airport operations around the world. NARVs are produced by commercial endeavours (non-operational sources), such as retailing, the sale of goods and services, leasing, or the payment of parking fines (Fuerst *et al.*, 2011). Findings from the study by Battal & Bakir (2017) indicated that, about half of all airport revenues in North America, Africa and the Middle East come from non-aeronautical revenues. . On the other hand, the share is between 46% and 48% in Asia and the Pacific and 30% in Latin America. (). This suggests that in order for airports around the world to continue operating profitably, they will need to alter their business strategies in order to rely less on aeronautical revenues (ARVs) which can be easily impacted by a variety of factors such as rising operating expenses or global health pandemics like Covid-19. . Due to their inability to produce sufficient cash from aeronautical sources, airports all over the world experienced the decrease in their revenues (Bartle *et al.*, 2021).

The emergence of low-cost airlines has resulted from decreased in air travel expenses, which has boosted the number of people using air travel to visit various locations throughout the globe. It takes better airport infrastructure to make this possible and to keep air travel affordable for many.

Tanzania's desire for air travel has been continuously increasing, much like it has in other nations throughout the world. In comparison to 2016/2017, there were 4,950,994 more passengers that travelled by air between July 2017 and March 2018 (URT, 2018). The bulk of travellers that travel by air in the nation do so through Julius Nyerere International Airport (JNIA), which is the largest and busiest airport in the nation and has a six million passenger capacity annually.

However, the complexity of modern airports and the on-going evolution of air travel have not

been taken into account while examining Tanzania's airport business model trends. The focus is still on limited aeronautical revenue streams that could have an adverse effect on the number of flights and passengers, with less attention being placed on non-aeronautical revenue sources. This is demonstrated by proposals to introduce an aeronautical tax, a security fee, with the goal of enhancing airport security infrastructure. However, certain airports throughout the globe have implemented a variety of strategies to boost their non-aeronautical profits by decreasing the operational expenses of airplanes through the reduction of parts of the aeronautical fees to attract more affordable carriers to operate in such airports (Orth *et al.*, 2015).

Despite the continuous increasing in non-aeronautical income for most of airports in the country, there is still a strong focus on aeronautical revenue streams among lawmakers and policy-makers in Tanzania.. In order to better understand how non-aeronautical revenues affect the improvement of airport facilities at JNIA, this give the reasons for study to be conducted.

Theoretical review

The Agency Theory

The 1960s and 1970s saw the emergence of this, which concentrated on the issue of business ownership and how that affected organizational behavior (Kenichiro, 2015). The theory's proponents contended that businesses are affected by the interests of their owners or major shareholders, which are reflected in the business models chosen and the objectives to be achieved. Government-owned businesses will be managed by bureaucrats who prioritize social welfare and customer service, while privately owned businesses will have a profit-driven management strategy.

Public-private partnership-owned businesses will make an effort to strike a balance between maximizing profits and the welfare of society (Keers & van Fenema, 2018)

According to Kutlu (2020), this theory was helpful in the study because it addresses the issue of ownership, which is crucial to comprehending a firm's business model, the priorities set, and its flexibility and autonomy in terms of policies, timeframes to achieve them, as well as areas of priorities. The flaw with this hypothesis, though, is that it leaves out other aspects of ownership

that might also have an impact on a firm's success, such as management policies and how they are carried out in practice.

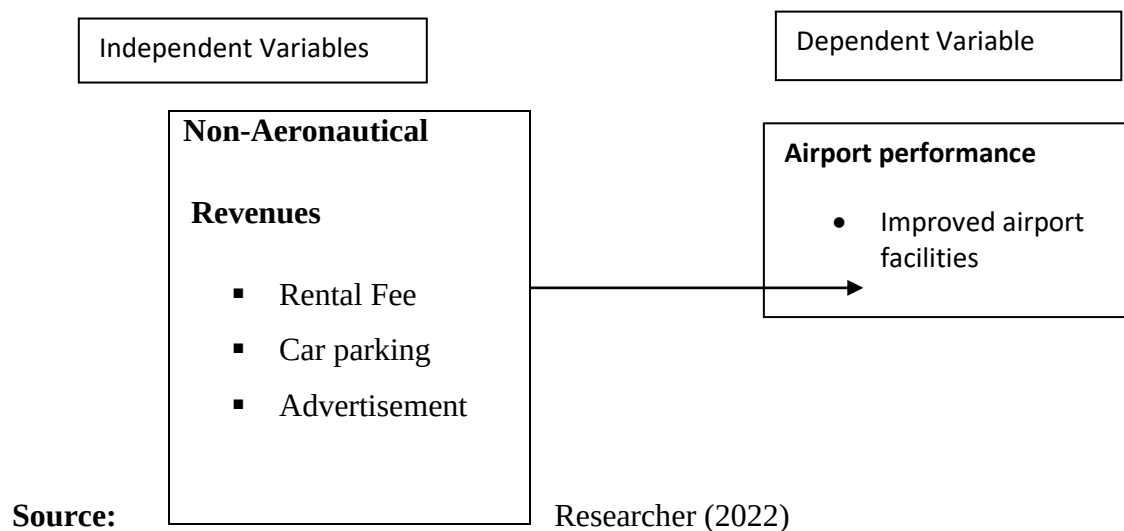
Research Gap

Various studies on the sources of airport revenue from around the world and the effects of these funds on enhancing airport infrastructure have been conducted. However, as shown by some of the different research mentioned above, many of these studies were conducted in other nations or continents or did not particularly address the matter of how more NARVs contribute to better airport amenities. This study is required because, specifically, the problem of non-aeronautical revenues on enhancing facilities at JNIA is not adequately addressed.

Conceptual Framework

According to the conceptual framework, the components in this study that are the independent variables that improve the facilities at JNIA are non-aeronautical revenues. These indicate that, establishment of car packing, advertisement and introduction of rental fee as alternative sources of income for airports could contribute much on the improvement of their facilities. The conceptual structure of the study is shown in figure 1 below.

Figure 1: Conceptual Framework



Methodology

The paper employed longitudinal research design in undertaking the study. Data gathered from the field which involved the collection of the annual financials and integrated reports of JNIA for the financial years 2017/18 to 2020/21 were analyzed with the help of Statistical Programmed for Social Sciences (IBM SPSS) Statistics, version 26.0. To analyze the contribution of non-aeronautical revenues, the multiple linear regression models were used. The used of this mode is because the dependent variable (airport performance) is measured as a continuous value. The regression model used was represented by the following equation.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad (2)$$

Whereby

Y = Airport Performance (number of perssagers)

X_1 =Rental fee

X_2 =Car parking fee

X_3 =Adivertisement

β_0 =Constant term

β_1, β_2 & β_3 = Coefficients of $X_{1,2,3}$

ε =Error term

Findings and discussion

Contribution of non-aeronautical revenues on improving airport facilities

Results from Table 1 shows that, R Squared is 78.5 percent, indicating that variations in the dependent variable were explained by rental fees car parking, advertisement by 79 percent of the

variation in non-aeronautical revenues on the improvement of airport facilities at Julius Nyerere International Airport. This justifies the fitness of the model under this study.

The results are displayed in table 1

Table1: Contribution of Non-aeronautical revenues on improving airport facilities

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.675	0.303		28.63	0.000
Rental fees	0.874	0.065	-0.364	13.144	0.000
Car parking	0.074	0.020	0.117	3.70	0.021
Advertisement	0.007	0.041	0.162	0.174	0.065
R ²	0.785				
Durbin-Watson	1.94				

Dependent Variable: Airport Performance (Number of Passages)

Source: Field Data, 2022

To ascertain how the study variables connect to one another, the researcher performed multiple regression analysis. According to table 4.5 findings from the study, 8.675 represented the constant utilized to forecast the value of Airport unit decrease occurred in Rental fees revenues will lead to a 0.074 decrease in Airport Performance; a unit increase in car parking will lead to a 0.064 increase in airport performance and unit increase in advertisement will lead to a 0.002 increase in airport Performance process. The study variables had both a positive and a negative relationship. At 5% significance and 95% confidence, rental fees revenues had a 0.000 level of significance, car parking fee had a 0.021 level of significant and advertisement had a 0.050 level of significant, indicating that the most significant factors were rental fee and car parking

For financial reasons, none of the respondents who were asked this question saw a direct correlation between the effects of NARVs on bettering airport amenities. They claimed:

“JNIA is allocated funds from the government through TAA”.

However, these funds are not separated depending on their source once they have been sent to the treasury (Akoodie & Cloete, 2020). When funds are disbursed to institutions like TAA, there are many instances where the funds are insufficient to meet the demands of the institution. This, in turn affects the priorities of TAA which operates fifty-eight airports and airstrips throughout the country.

One respondent said that,

“if TAA which operates JNIA was given financial autonomy to decide its own priorities there would be huge changes in the way projects are implemented as the sources of revenues would have been clearly differentiated for better planning and projecting future sources of NARVs”

Conclusion and Recommendation

The study's main goal was to determine how non-aeronautical earnings affected the development of JNIA's airport infrastructure. The study find out that at 5% significance and 95% confidence, rental fees revenues had a 0.000 level of significance, car parking fee had a 0.021 level of significant and advertisement had a 0.050 level of significant, indicating that the most significant factors were rental fee and car parking. In regard to these results the TAA should be left to keep a portion of the money it makes to use for projects that are important to them. Instead of the current arrangement, which makes it hard to establish which money were spent on what, there should be adjustments to the allocation of funds that define ARVs and NARVs as well as where exactly these monies will be spent. TAA and JNIA should reconsider their strategy for expanding their revenue streams by making investments in areas outside of aviation and airport-related concerns.

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Determinants Of Customers' Behaviour on Demanding for Sales Receipt In Building Material Sector: A Case Of Dodoma City, Tanzania

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Abstract

The study aimed at exploring factors affecting consumers' behavior in demanding sales receipts in Dodoma city. Specifically, the study addresses three objectives such are; to assess the awareness of customers in demanding receipts, to explore factors that influence consumers' behavior in demanding sales receipts and to examine the challenges facing customers in demanding receipts in Dodoma city. The study adopted a cross sectional research design to collect data from 93 customers and 10 key informants as the officers of building material sectors. Based on the findings of the study, the study concludes that factors affecting consumers' behavior determine and influence the demand for a sales receipt. The study revealed that knowledge and skills, the practice of customers in the building material sector; age and education of these customers are the factors which determine the awareness of customers in demanding a sales receipt. Policymakers should redirect their attention to addressing issues related to the challenges associated with customers' in demanding for sales receipts.

Keywords: awareness, customers, receipts

Introduction

A payment receipt is a document given to a customer as proof of full or partial payment for a product or service (Lee, Ju, & Jeong, 2006). A payment receipt is also referred to as a 'receipt for payment'. It is created after payment has been entered on a given sale. The amount of payment can be the full amount stated on the invoice for the sale or a partial amount. Payment receipts can be useful for both the seller and the buyer and are an additional document used in communication in the sales process (Lazenby, Hatch, Slater, Lauer, & Blind, 2007).

Payment receipts are created to provide the customer with proof of payment. It is a simple document that outlines the amount received by the seller, it confirms that the payment has been received and gives the basics of the sale. While payment receipts may seem to be primarily for the customer, they can also be useful for the issuing business in the case of partial payments, as they can act as a payment reminder for any remaining amount due (Bakhar, 2018).

Customers typically want a sales receipt any time they buy items or services because the receipt verifies that a transaction occurred and identifies exactly what was purchased. Sales receipts are useful from the merchant's perspective, they allow for inventory and revenue tracking (Parker, Souleles, Johnson, & McClelland, 2011). Following basic guidelines, while issuing sales receipts ensures the needs of both the merchant and customer are met. Even though a sales receipt can have dozens of individual items listed for the transaction, merchants should count each receipt only once. If vendors count receipts more than once, customers may be billed multiple times, leading to billing disputes. Small businesses in particular need to be aggressive about counting each receipt as a single entry because they are financially less able to resolve these conflicts (Berdad& Kuhn, 2013).

Tax is normally the main source of public revenue in any economy; this revenue is collected from consumption, income, properties, individuals and corporations. It is complemented by other sources of revenue such as royalty, dividends, grants, domestic borrowing, loans and grants from other countries (Keen, Toro, Baer, Perry, Norregaard, & Ueda, 2015). Known as the tax base, having an effective tax system that fairly distributes the tax burden among economic agents is a big push toward poverty and illiteracy eradication among countries (Alm, Kirchler, & Muehlbacher, 2012).

It was reported that, for developing countries to meet the desired millennium development goals, countries were to raise the tax share of GDP to 20 percent. Observations made in OECD countries show consumption tax forms the major portion of tax revenue (Gamage, Thimmesch, & Shanske, 2017). One consumption tax is Value-Added Tax (VAT) which is a tax revenue source that has gained popularity in many countries in the late twentieth century, and it accounts for about a quarter of all tax revenues collected worldwide. This tax was introduced back in the 1920s but gained recognition in France in 1948, then Brazil and Denmark in 1967 (Pomerleau, 2015).

Tax administrations have been working on how to deal with non-compliance behaviour at a minimum cost while maximizing collections without affecting the efficient operations of entities in an economy (Mwang'onda, Mwaseba, & Nkembo, 2018). Studies have been done to understand the complexity of this behaviour from economic, social norms, ethical and psychological perspectives. Using the theory of social learning, this study embarks on the same journey by investigating the perception of customers on demanding sales receipts for tax collection maximization. Social learning theory focuses on the learning that occurs within a social context. It considers that people learn behaviours from one another, including such concepts as observational learning, imitation, and modelling (Nabavi, 2012).

In any case, it's demonstrated that clients don't know about genuine and counterfeit receipts. There is a tremendous laxity of conduct inclination among Tanzanians of not asking and understanding receipts. Nonetheless, it's shown that clients don't know about genuine and counterfeit receipts. So it's suggested that the public authority can contribute by fixing CCTV cameras to screen broker's deals focuses (Sakaya, 2020). EFD compliance is strongly associated with the consumer's perception of detection and punishment risks, and with the business representative's perception of other businesses' compliance behaviour. Further, it's suggested that taxpayer education programs and information campaigns should emphasize customers' rights and obligations to get a proper VAT receipt (Fjeldstad & Somville, 2020).

Edification and sufficient use of tax revenue on public goods will deter charge aversion and tax avoidance, high duty rates support charge aversion and tax avoidance, individual annual assessment age has not been great and individual personal expense rates are excessively high (Adebisi & Gbegi, 2013). Therefore, if there is a huge tendency for customers to not ask for a sales receipt, this leads to low tax rates. This study assesses factors affecting consumers' behavior in demanding sales receipts in Dodoma city, a case study of the building material sector.

Review of Literature

Awareness of Customers in Demanding Receipts towards Tax Collection Maximization

A review was directed in Tanzania on client comprehension of Certified versus Fake Electronic Gadget Receipts in Moshi Region (Sakaya, 2020). The primary goal of the paper was to break down client consciousness of veritable versus counterfeit EFD receipts. The review utilized a study plan to gather information from 140 individuals utilizing

straightforward, delineated and purposive irregular examining methods. Data was gathered utilizing a survey and examined through ecological measurements. The review uncovered that clients don't know about authentic and counterfeit receipts. There is an extraordinary laxity of conduct among Tanzanians of not asking and understanding receipts. Then, at that point, the review proposed that the public authority could contribute by fixing CCTV cameras to screen the retail location of the dealer.

A study conducted about the customer is king: the evidence on VAT compliance in Tanzania (Fjeldstad & Somville, 2020). The study was designed and conducted in collaboration with the research, policy and planning department of TRA. The data collection was done from June up to July 2017 in the Dar es Salaam Region, the commercial centre in Tanzania. The study covered five tax centres: Upanga, Kariakoo, Buguruni, Tegeta and Mwenge. Data were collected by surveying a random sample of business representatives in five selected centres. The sample consisted of 314 business-customer pairs. The study findings revealed that EFD compliance is strongly associated with the consumer's perception of detection and punishment risks, and with the business representative's perception of other businesses' compliance behaviour. Further, the study recommended that taxpayer education programs and information campaigns should emphasize customers' rights and obligations to get a proper VAT receipt.

Influence of Customers in Asking for Sales Receipts on Tax Collection Maximization

The review was led in Tanzania about the view of citizens on the reception of electronic monetary gadgets (EFDs) in income assortment in Dodoma (Kira, 2016). The review explored the citizen's view of the utilization of Electronic Financial Gadgets (EFDs) by dissecting the advantages of involving EFDs in income assortment; the impression of citizens towards the utilization of EFDs and challenges towards the utilization of the EFDs in income assortment. The review embraced a study research plan to accumulate data from 75 citizens. The review discoveries uncovered that EFDs have decreased the time it takes to plan deals report, secure duty data for examining reason and exchange and guarantees charge rate are paid by the citizens. Then the review prescribed TRA to guarantee sharpening, instruction and preparing programs are elevated to citizens' consciousness of EFDs.

A study was conducted through the application of the theory of planned behaviour about underlying factors on consumers' behaviour in asking for sales receipts towards tax collection

maximization (Mwang'onda, Mwaseba, &Nkembo, 2018). The study used a theory of planned behaviour of consumers as a third-party tax enforcer by asking for sales receipts after the transaction. Data were collected from 118 respondents at Dodoma municipality. The study revealed that most of the customers acknowledge the goodness, desirability or importance of asking for a sales receipt, which is argued to imply efficiency of the tax collection exercise. Also, the study revealed that relatives and friends have a significant effect on the individual behaviour of asking for a receipt.

Challenges Facing Customers in Demanding EFD Receipts towards Tax Collection Maximization

The review was directed in Tanzania about the impression of citizens on the reception of electronic monetary gadgets (EFDs) in income assortment in Dodoma (Kira, 2016). The review researched the citizen's view of the utilization of Electronic Monetary Gadgets (EFDs) by dissecting the advantages of involving EFDs in income assortment; the impression of citizens towards the utilization of EFDs and challenges towards the utilization of the EFDs in income assortment. The review embraced an overview research plan to assemble data from 75 citizens. The review discoveries uncovered that the difficulties looked by EFDs clients incorporate excessive costs of EFD machines, faint financial expense solicitations, EFD network issues, absence of citizen instruction EFDs applications and hardly any providers of EFDs machines. Then the review prescribed TRA to guarantee sharpening, instruction and preparing programs are elevated to citizens' consciousness of EFDs.

The review was led in Tanzania about challenges confronting citizens in embracing the utilization of electronic financial gadgets (EFDs) (Kenedy, 2014). In particular, the review planned to decide why citizens oppose utilizing EFDs, investigate whether citizens know about EFDs and lay out whether all qualified citizens were approached to purchase the gadget. The example of the review was 51 respondents which were administrators, tops of the units, citizens and partners. The review discoveries uncovered that most of respondents oppose utilizing EFDs in light of the difficulties forced by the gadgets which incorporate negative mentalities of citizens towards EFDs, EFDs information not notable, bad quality of EFDs, time utilization, significant expenses and bad quality of receipts.

Theoretical Framework

The theory of social learning was created by Albert Bandura in 1977. Before the years 1961 and 1963, Bandura conducted several tests to verify if social behaviour can be determined by observation and imitation. In 1986, the development of social learning theory led to the emergence of social cognitive theory (Bandura, 1971). Therefore, social learning theory is one of the theories under social work theories. Social learning shows that social behaviour is learned by observing and responding to the behavior of others. Social learning theory looks at learning that occurs within a social context. It observes that people learn from each other, involving concepts such as observational learning and imitation (Nabavi, 2012).

Social learning theory has its major strength of being flexible in explaining a person's behavior through environmental changes, thus once the environment changes the person's behavior also might change. Strength of social learning theory explains different ways of learning different behaviors, for instance, a person can learn behavior through observing or direct experiences. Though the theory fails little to show learning and behavior changes through possession of a person's information rather than depending on environmental factors. The theory further fails to show changes in customer behavior according to developmental milestones in environmental settings.

The concept of customers' behavior in demanding sales receipts is explained in the social learning theory through learning as it's clarified in the theory is imitated, modeled and observed. In society, customers are surrounded by many influential models, such as parents within the family, characters on mass/social media, friends within their peer group, religion,

other members of society, and the school. Customers learning behavior might occur in any environment like church, school, youth groups, or during travel (Plan International, 2012). Consequently, according to social learning, reinforcement and punishment have indirect effects on behavior and learning which can cause customers to learn through imitating, modeling and observing behavior.

Methodology

This study was carried out in Dodoma city. The research was led utilizing qualitative and quantitative approaches. A research design is a construction or diagram for doing a review. The study adopted a cross sectional research design. The target population was individuals who are normal citizens of Tanzania living in Dodoma city. Therefore, consumers of the building material sector were the target and were selected for the sample.

The sample in the current study was calculated by using the unknown formula for population size to get 100 customers because the population of people living in the city is huge. The following formula calculates the sample size of the study.

$$\frac{Z^2 * (p) * (1-p)}{c^2}$$

Where:

Z = Z value (1.96 for 95% confidence level)

p = percentage picking a choice expressed as a decimal (0.5 used for sample size needed)

c = confidence interval, expressed as decimal = 0.1.

$$n = \frac{2^2 * 0.5 * (1-0.5)}{0.1^2} = 100$$

Along these lines, in this study simple random technique was utilized to choose respondents for consideration in this review. Therefore, straightforward arbitrary examining was utilized to choose 100 purchasers in light of their age and sex to address the remainder of the all out populace. The justification behind utilizing this strategy is that straightforward arbitrary

examining is equipped for giving equivalent open door to all shoppers to take part in the review.

Open and closed-ended questions were used to gather data from the consumers regarding their behaviour in demanding for EFDs receipt toward tax collection maximization in Dodoma city. It was also used to collect data about challenges they face while they demand EFDs receipt. The intention of using closed-ended questions is to improve the consistency of responses from the consumers.

On the other side, the study employed structured interviews, which gave the author great confidence in gathering information from key informants. The structured interview method was more efficient, effective, and time-saving because the informants responded based on the prepared guide (Creswell, 2009). The method helped the researcher to get in-depth information about the phenomena. The method helps the researcher to interact with the respondents. Thus, in this study, the researcher interviewed 10 key informants in the building material sector: Trident building material ltd (2), Dar ceramic Dodoma branch (2), RSR company ltd (2), Lawate building material supplies (2) and J. Mrema building materials supplies (2).

Analytical Model

The interview checklist was employed to get more qualitative information which was not covered in the administered questionnaires. The questions were set in a way to give them adequate exposure to express their views based on their valuable experience. Therefore, the method assisted the researcher to get appropriate qualitative data from key informants which further helped him to accomplish the study.

Qualitative data were collected by using thematic analysis. Quantitative data were obtained through a questionnaire, which was subjected to respondents to respond to the issues of consumers' behaviour in demanding for EFDs receipt. Data were analyzed through means, SD and percentages by using Statistical Package for Social Sciences (SPSS) (version 20). Further, a binary logistic model was used to analyze the influential factors that lead to consumers' behaviour to demand EFDs receipt in Dodoma city. Therefore, the following is the econometrical model of a binary regression model.

The independent variables that were used are customer's behaviour factors such as age, sex, education level, friends, relatives, peer groups and attitudes were firstly captured using 5point Likert scales (1= Strong disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strong agree). The dependent variable was demanding sales receipts which were captured as dichotomous variables of 1= Yes and 2= No.

Analysis of factors that influence consumers' behaviour in demanding a sales receipt, the binary logistic model used to estimate the influence;

The logitmodel was specified as;

$$L_i = \ln \left(\frac{p_i}{1 - p_i} \right) = \beta_0 + \beta_1 \text{Relatives} + \beta_2 \text{Friends} + \beta_3 \text{Sex} + \beta_4 \text{Attitude} + \beta_5 \text{Education} \varepsilon_i \dots \dots \dots (i)$$

Where;

L_i = the Logit (log of the odds ratio)

$\ln$ = logarithm

p_i = a probability that customer behavior factors influence demand for a sales receipt.

$1 - p_i$ = a probability that customer behavior factors do not influence demand for a sales receipt.

β_0 = intercept

$\beta_1 - \beta_5$ = are coefficients to be estimated

Finding and Discussion

Demographic Information

Using the research questions, the study explores the demographic characteristics which were useful to the researcher (questionnaires). Respondents' age, sex, education, and marital status are examples of such characteristics.

Age of Respondent

These findings were revealed as the demographic information of all respondents involved in this study. The study findings as presented in Table 1 below revealed that on average 40 years old customers were involved in this study. These results imply that youth are most of all age groups who are involved directly in the demanding of the sales receipt. These results are in line with those of Adharshet *al.*, (2018) who revealed that out of all the transactions through e-payments, a higher percentage is done by Indian Youth. However, the study conducted by Tronget *al.* (2020) in Vietnam employs survey data of 200 young internet users aged 18 to 25 years. Therefore, the younger customers had more effort and ability to demand sales receipts which results in increasing the national income.

Table 31: Age of respondents

	N	Minimum	Maximum	Mean	Std. Deviation
Age of Respondent	93	20	67	40.39	12.626
Valid N (listwise)	93				

Sex of Respondent

These findings were revealed as the demographic information of all respondents involved in this study. As presented in Table 2 below, the study findings show that the total number of respondents involved was 93 customers in the study area, where 58.1% were male, and 41.9% were female. These results imply that most males had higher sales receipt perceptions. Thus, they participate in the demand for sales receipts as customers more than females. These results are in harmony with Yaokumahet *al.*, (2017) who revealed that male customers had higher ICT skills, however, they perceive less e-payment service. Likewise, Lwoga (2017) revealed that the influence of ease of use on behavioural intention was moderated by gender in using mobile payment. It is more significant for men than for women. Laukkanen and Pasanen (2008) realised that customer age had a positive impact on customer perception.

Table 32: Sex of respondents

	Frequency	Percent
Male	54	58.1
Female	39	41.9
Total	93	100.0

Education Level of Respondent

These findings were revealed as the demographic information of all respondents involved in this study. As presented in Table 3, the study findings revealed that there were 7 primary education customers, 14 certificate level of education customers, 5 certificate level

customers, 16 customers with diploma level of education, 6 masters degree level of education and the majority of customers assessed in the study (41.9%, N= 39) had secondary education level followed by those (17.2%, N= 16) who had diploma level of education. These results entail that educated customers following the specific curriculum of secondary education and above have specific knowledge and skills to know the importance of receiving sales receipts to them in the presence of the government. These results were supported by Salloumet *al.* (2019) who used 289 students at higher learning institutions as a sample in their study. Therefore, the increase in the level of education is influencing the increase in the use of demanding the receipt.

Table 33: Education level of respondents

	Frequency	Percent
Primary education	7	7.5
Secondary education	39	41.9
Certificate	14	15.1
Diploma	16	17.2
Bachelor degree	11	11.8
Masters' degree	6	6.5
Total	93	100.0

Marital status of Respondent

These findings were revealed as the demographic information of all respondents involved in this study. As presented in Table 4, the study findings revealed that 20.4% of the respondents were single, 11.8% of respondents were widows, 9.7 % of respondents were separated and the majority of respondents assessed in the study (58.1%, N= 54) were married. These results entail that customers of material sectors and their demand in sales receipt live with their families as the husbands or wives; thus, they can cooperate with skills and knowledge in the situation of demanding the sales receipt and thus they might encourage increasing the demand of sales receipt, especially in the material sector.

Table 34: Marital status of respondents

	Frequency	Percent
Single	19	20.4
Married	54	58.1
Widow	11	11.8
Separated	9	9.7
Total	93	100.0

The Awareness of Customers in Demanding Receipts

The awareness of customers in demanding sales receipts was explained through different variables which measure the awareness. Those variables include; practice in using and demanding the sales receipt, knowledge and skills in demanding sales receipt, education and age of the customers.

Knowledge and skills

These findings were revealed as the awareness of customers in demanding a sales receipt. The study findings as presented in Table 5 indicate that the majority of respondents (Mean > 3.00) negatively responded (strong disagree/disagree) to the presence of knowledge and skills in the effective use of sales receipts. These results imply that; customers in the building materials sector are not aware of the sales receipt and its components; they don't know the implication of the description of receipts including the amount and other charges, and they haven't got the skills of reading the receipt. These results were in harmony with those of Sakaya (2020) whose study revealed that customers are not aware of genuine and counterfeit receipts. (Sakaya, 2020). There is a huge laxity of behaviour tendency among Tanzanians of not asking and reading receipts. Then, the study recommended that the government can invest by fixing CCTV cameras to monitor traders' sales points. These results were supported by the qualitative findings which exhibit:

“...most of our customers are not aware of some key relevant items that are found in the EFDs receipt. This makes them not in a position of demanding a sales receipt that there are not knowledgeable about and lack relevant skills in using the receipt. Not only our customers but sometimes even the seller doesn't know to use the receipt and thus contribute to the wrong post of the figures... (12th March 2022”

The quotation indicates that customers and even the suppliers lack the knowledge and relevant skills to use EFDs machines and thus increase the tendency not to demand sales receipts.

Table 35: Knowledge and skills in demanding sales receipt

	N	Mean	Std. Deviation
Am aware of the sales receipt and its components	93	3.70	1.111
I know the implication of the description of receipts including the amount and other charges	93	3.31	1.093
I have got the skills of reading the receipt.	93	3.20	1.395
Valid N (listwise)	93		

Practice

These findings were revealed as the awareness of customers in demanding a sales receipt. The study findings as presented in Table 6 indicates that the majority of respondents (Mean > 3.00) negatively responded (strong disagree/disagree) to the presence of individual practice in the effective use of sales receipt. These results imply that; customers of the building materials sector do not need to know the application of sales receipts, they do not need to demand the receipts rather than forgetting and they will rather consume without having a sales receipt. These results were in harmony with those of Sakaya (2020) whose study revealed that customers are not aware of genuine and counterfeit receipts. There is a huge laxity of behaviour tendency among Tanzanians of not asking and reading receipts. Then, the study recommended that the government can invest by fixing CCTV cameras to monitor traders' sales points.

Table 36: Practices toward demanding sales receipt

	N	Mean	Std. Deviation
I need to know the application of sales receipts	93	3.47	1.138
I always need to demand the receipts rather than forgetting	93	3.28	1.201
I will rather not consume without having a sales receipt	93	3.17	1.472
Valid N (listwise)	93		

Factors Influencing Consumers' Behavior in Demanding Sales Receipts

The logistic regression model goodness of fit was used to see the influence of consumers' behaviour in demanding a sales receipt. Table 7 below shows the model summary of the influence of customers' behaviour on-demand sales receipts included in the model.

Model Summary

The test indicated that Cox & Snell R square and Nagelkerke R square were positive (0.344 & 0.459). These results imply that the model is explained from the total variation by 34.4% and 45.9% coefficients of determinations.

Table 37: Model Summary of coefficient of determination

Step	-2 likelihood	Log Cox & Snell R Square	Nagelkerke R Square
1	89.226 ^a	.344	.459

Hosmer and Lemeshow Test

The Hosmer and Lemeshow test which is also used to test model goodness of fit was 8.935 with $p=0.348$ (>0.05). Therefore, the recommended model fits well the set of data.

Table 38: Hosmer and Lemeshow Test on chi-square

Step	Chi-square	Df	Sig.
1	8.935	8	.348

Influence of Consumers' Behavior in Demanding Sales Receipts

The findings as presented in Table 9 revealed that the sex of customers in the building material sector has a significant influence on the demand for sales receipts at $\beta= 1.410$ and a significant 5% ($p\text{-value} =0.025$). This means that with a 1 unit increase in sex of customers in the building material sector the demand for sales receipt in the building material sector increases. Also for the odd ratio of 4.094, the analysis indicates that the sex of customers in the building material sector is 4.094 times more likely to increase the demand for sales receipt rather than not determining the sex of a customer. Therefore, the sex of the customers differs in the degree of demand for sales receipt as it was suggested by the social learning theory that social behaviour is learning by observation and copying.

Table 39: Influence of Consumers' Behavior in Demanding Sales Receipts

	B	S.E.	Wald	df	Sig.	Exp(B)
Sex	1.410	.631	4.990	1	.025	4.094
Education	-1.073	.362	8.786	1	.003	.342
Relatives	.195	.595	.108	1	.743	1.216
Friends	1.342	.733	3.350	1	.067	3.827
Attitude	-1.331	.900	2.188	1	.139	.264
Peer groups	.580	1.389	.175	1	.676	1.787
Constant	-1.024	1.924	.283	1	.595	.359

These results were supported by the social learning theory which suggests that social behaviour is learned by observing and copying the behaviour of others. Social learning theory focuses on the learning that occurs within a social context. It considers that people learn from one another, including such concepts as observational learning, imitation, and modelling

(Nabavi, 2012). In this context the learned behaviour is through gender, thus men copy men and women copy women.

The findings revealed that the education of the customers of the business material sector has a negative significant influence on the demand for sales receipt at $\beta = -1.073$ and a statistical significance of 5% ($p\text{-value} = 0.003$). This is indicated by the odd ratio of 0.342 which imply that having customers with higher educational qualifications is 0.342 times more likely to decrease the demand for sales receipt than customers with lower educational qualifications.

Furthermore, the findings revealed that friends have a positive significant influence on the demand for sales receipt $\beta = 1.342$ and a statistically significant at 10% ($p\text{-value} = 0.067$). This is indicated by the odd ratio of 3.827 which means that having customers who are friendlier oriented is 3.827 times more likely to increase the demand for sales receipts. These results are in harmony with those of Mwang'onda *et al.* (2018) who revealed that many customers acknowledge the goodness, desirability or importance of asking for a sales receipt, which is argued to imply efficiency of tax collection exercise.

These results were supported by the social learning theory which suggests that social behaviour is learned by observing and copying the behaviour of others. Social learning theory focuses on the learning that occurs within a social context. It considers that people learn from one another, including such concepts as observational learning, imitation, and modelling (Nabavi, 2012). One of the major agents of socialization is friendship. Through friends, the majority of people adopt the behaviour of others. Therefore, in this study the demand for sales receipts depends on the type of friends the customer has, if there are demands for sales receipts then his or her friend will demand also.

Challenges Facing Customers in Demanding Sales Receipts

The study revealed different challenges that face customers in demanding for sales receipts. Those challenges were customer care, time, forgetting, number of customers and receipt provision.

Customer care

These findings were revealed as the challenges facing customers in demanding a sales receipt. The findings as presented in Table 4.10 revealed that 49.5% of total customers involved in this study indicated that poor customer care from sellers is one of the challenges that face customers in demanding a sales receipt. These results imply that failure to treat customers well leads to misunderstanding between the buyer and seller which in turn contribute to less demand for a sales receipt. These results were supported by qualitative findings which exhibit:

"...Majority of our customers are those who are generally the customers who are frequently our daily customers when needs to buy our goods... (11th April 2022)"

The quotation indicates that there is no customer care for the majority of the building materials sector hence the study found that the new customers are not given the service if and only if the old customers are been already given the service and thus increasing the tendency of not demanding for the sales receipt.

Table 40: Challenges encountered by customers when demanding sales receipt

Challenges	Responses		Percent of Cases
	N	Percent	
Poor customer care from the sellers	46	20.7%	49.5%
Time for waiting for the receipt	81	36.5%	87.1%
Many times I forget to demand the receipt	35	15.8%	37.6%
A huge number of customers	36	16.2%	38.7%
Sometimes the sellers didn't provide the receipt	24	10.8%	25.8%
Total	222	100.0%	238.7%

Time

These findings were revealed as the challenges facing customers in demanding a sales receipt. The findings as presented in Table 4.10 revealed that 87.1% of total customers involved in this study indicated that time waiting for the sales receipt is one of the challenges that face customers in demanding a sales receipt. These results were not in line with those of Kira (2016) whose findings revealed that the use of EFDs has reduced the time it takes to prepare sales report, secure tax information for auditing purpose and transaction and ensures tax rate are paid by the taxpayers. Then the study recommended TRA to ensure sensitization, education and training programs are promoted to taxpayers' awareness of EFDs.

Forgetting

These findings were revealed as the challenges facing customers in demanding a sales receipt. The findings as presented in Table 11 revealed that 37.6% of total customers involved in this study indicated that many times customers forget the receipt as one of the challenges that face customers in demanding a sales receipt. The study noted that customers forget to demand sales receipts due to the number of factors that Kennedy (2014) reported on it. The study findings revealed that the majority of respondents resist using EFDs because of the challenges imposed by the devices which include negative attitudes of taxpayers towards EFDs, EFDs knowledge not well known, low quality of EFDs, time consumption, high costs and low quality of receipts.

Number of customers

These findings were revealed as the challenges facing customers in demanding a sales receipt. The findings as presented in Table 4.10 revealed that 38.7% of total customers involved in this study indicated that a huge number of customers is one of the challenges that face customers in demanding a sales receipt. These results imply that a huge number of customers with a lower number of sellers lead to the burden of activities in the office and thus

increases the behaviour of not demanding the receipts. These results were supported by qualitative findings which exhibit:

“.... Yes we have a big number of customers and we are capable of dealing with them at the time when the customer needs the service... (11 April 2022)”

The quotation indicates that having a huge number of customers in the office means that the affordability in providing the service will not be 100 percent pure and thus increase the tendency of not providing for the sales receipt.

Receipt provision

These findings were revealed as the challenges facing customers in demanding a sales receipt. The findings as presented in Table 4.10 revealed that 25.8% of total customers involved in this study indicated that sometimes the sellers didn't provide the receipt as one of the challenges that face customers in demanding a sales receipt. These results imply that majority of customers were not been provided with the sales receipt and this was observed by the researcher in different building materials offices.

Conclusion

The study concludes that factors affecting consumers' behaviour determine and influence the demand for a sales receipt. Specifically, it concludes that knowledge and skills, the practice of customers in the building material sector; age and education of these customers are the factors which determine the awareness of customers in demanding a sales receipt. Moreover, the study concludes factors that influence consumers' behaviour in demanding sales receipts include the sex of a customer, the education level of a corresponding customer and friends. Finally, the study concludes that the challenges facing customers in demanding for receipt include poor customer care, time wastage in demanding a sales receipt, many times customers forget to demand the receipt, huge number of customers in the shop or enterprise and sometimes the supplier didn't provide the receipt as the result of tax avoidance.

Recommendations

The following recommendations are made based on the findings of this study in order to improve the effective demand of sales receipts to customers in Tanzania. Thus, these recommendations are directed to policymakers, customers, and the government.

Policymakers should redirect their attention to addressing issues related to the challenges associated with customers' in demanding for sales receipts including customers, suppliers and the factors which were determined that will improve demand for sales receipts. Considering these factors will enhance the outcome of national income in terms of demanding sales receipts in the country.

TRA should provide education about the impact and use of sales receipts. As it was indicated from the findings that education is one of the factors which determine the customers in

demanding a sales receipt, therefore putting much emphasis on educating the customers starting from the academic institution will improve the demand for sales receipts.

The study recommends that taxpayers should have influence to each other in demanding for sales receipt. This could be adopted through friendship, family influence and other social groups' integration.

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The Effects of Mobile Banking Technology On Customers' Satisfaction In CRDB Bank Dodoma City

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Abstract

The general objective of the study was to find the effect of mobile banking technology on customer's satisfaction using CRDB Plc. in Dodoma city as a case. Specifically the study intended to assess the effect of volume of mobile banking transactions on customer satisfaction, to determine the effect of mobile banking services provision on customer satisfaction and to assess the effect of cost of mobile banking services on customer satisfaction. A cross sectional research design was adopted to collect information from 84 respondents by using questionnaire. Binary logistic regression was used to analyze data and draw conclusion based on statistical implications. The findings revealed that, cash deposits, transfer and withdraws have positive significant effect to the customer satisfaction. Also it was found that, fund transfer between accounts, bill payment and Order for cheque books and bank statements have positive significant effect to the customer satisfaction. Finally, it was revealed that cost of acquiring mobile banking system have positive significant effect to the customer satisfaction. With regard to the findings above it, can be concluded that the introduction of mobile banking technology by CRDB plc has increase customer satisfaction by a large margin. For these points CRDB plc bank should increase investment in mobile banking technology since it provides a high range of customer satisfaction and so more and more customers will increase just to enjoy the attributes of mobile banking technology.

Keywords: mobile banking, customer, customer satisfaction, customer service

Introduction

Mobile banking has revolutionized how individuals in underdeveloped nations send and receive money, and it is now ready to provide more complex banking services that may significantly improve people's lives. This type of banking can provide a wide range of services, such as account information and alerting users to updates and transactions on their accounts via mobile devices. On mobile phones, people receive brief alerts reminding them

of recent activities in their bank accounts. Additionally, they assist with payments (utility bills), deposits, withdrawals, transfers, airtime purchases, bank statement requests, and thirteen other essential banking procedures, all in real time through their mobile phones (Mabwai, 2016).

Kigen (2019) claims that mobile banking, or m-banking, entails using a cell phone or other mobile device to carry out financial transactions connected to a customer account. M-banking, according to Kingoo (2018), is the provision and use of banking and financial services through mobile telecommunications equipment. Through a mobile device, such as a cell phone, which is most popular in developing nations, or a Personal Digital Assistant, services include completing balance checks, account transactions, payments, credit applications, and other banking transactions (PDA).

The Bank of Tanzania (the BOT) announced its intentions to introduce the Tanzania Immediate Payment System, a new instant payment system, earlier this year (TIPS). TIPS will serve as a shared platform for payments because it will enable card transactions as well as those performed through mobile banking, electronic money systems, and internet banking (Msinjili, 2019).

At the moment, a large number of Tanzanians use mobile money platforms like M-Pesa (by Vodacom), Airtel Money (by Airtel), and Tigo Pesa (by Millicom), among other mobile money payment systems provided by mobile network operators (Non-Banking System), while a smaller number of people have bank accounts with Tanzanian banks that are still in business (Banking System). TIPS would enable for cross-platform transactions and provide instant confirmation as to whether the money has reached the recipient, which is frequently a worry when individuals use banking services in Tanzania. This would help to close the gap between the Non-Banking System and the Banking System (Kasanda, 2019).

CRDB Bank Plc. hereinafter referred to as CRDB Bank, is a leading Financial Services Provider in Tanzania with current presence in Tanzania and Burundi, East Africa. The Bank was established in 1996 and was listed on the Dar Es Salaam Stock exchange (DSE) in June 2009. Over the years, CRDB Bank has grown to become the most innovative and preferred financial services partner in the region. Supported by a robust portfolio and uniquely tailored products, CRDB Bank remains the most responsive bank in the region. CRDB Bank offers a comprehensive range of Corporate, Retail, Business, Treasury, Premier, and wholesale

microfinance services. The Bank has a TZS. 3.5 trillion loan portfolio that commands 21% of the market share (Habaradas, 2013).

Mobile banking is a service provided by a bank or other financial institution that allows its customer to carry out financial transactions remotely using an electronic device, such as cell phones, tablets or laptops. Mobile banking is normally open 24 hours a day. Increased consumer use of mobile banking would contribute to the success of sensitive customer information protection. CRDB Bank customers were aware of the nature of mobile banking, but some of the features have limitations that need to be addressed as a matter of fact. Some vulnerability has so far been recorded as fraudulent events and non-insurance of customer sensitive information. The level of mobile banking at CRDB Bank is moderate according to the test (Massae, 2020).

Customers are at the focal point of every business and banks are no different. Apart from doing business with other businesses banks are also entrusted with individuals' assets and finances. The banking sector is now highly competitive and therefore there is need to keep the customers coming. Customer satisfaction is very important as it has many benefits other than keeping the customers content. Satisfied customers can market the bank's services to the benefit of the bank itself. In addition, customer satisfaction can also enhance profitability as the current customers continue to enjoy the services. This is important as it has been found that it is cheaper to keep current customers than acquiring new ones. In addition, customer satisfaction has also been found to lead to customer loyalty. Customers who are happy with the bank's services will continue using them and in time be not interested in other offerings by other banks (Shah *et al*, 2015).

Everyday individuals, businesses and government trade/exchange goods and services for money. Money is therefore used as main medium of exchange. A payment system can be considered to be a mechanism to move money between a payer and payee. In Tanzania cash is the most popular medium/instrument of payment. However, other non-cash payment instruments have been introduced including Paper-based instruments (cheques, payment orders, bills of exchange, promissory notes and), Electronic Funds Transfers (EFTs), card payments (credit cards, debit cards, prepaid cards), internet banking, mobile banking, mobile money (BOT, 2021).

A mobile banking project was started in Tanzania thanks to a helpful collaboration between The MasterCard Foundation and FINCA, an organization that fights poverty by running a network of microfinance programs in 23 countries. More than one-third of the FINCA clients in Tanzania currently have access to and are using banking services and saving deposits as a result of its implementation. Additional advantages of mobile banking include quicker deposits, less hazards of carrying cash when traveling, and reduced travel time. Additionally, FINCA Tanzania collaborated with mobile carriers to save costs and offer efficient transactions. The MasterCard Foundation and FINCA look forward to sharing their best practices and lessons acquired through these partnerships, as well as assisting other microfinance organizations in successfully implementing comparable programming (Marandu, 2019).

Some researchers such as Shaban (2004), Kipchauri (2018) detailed addressed this case, but limited only to high standard citizens who willingly at any time have a reliable mobile service connection and access to access the banking system. The study aims to determine whether mobile banking affects customer satisfaction.

Literature Review

Theoretical Framework

Mobile banking

Mobile banking, as described by Shaikh and Karjaluoto (2015), is the practice of conducting financial transactions via a mobile device. Some financial institutions, particularly banks, offer the service. Customers and users of mobile banking can complete a variety of transactions, which may differ depending on the institution. Mobile banking will be the primary focus of the study as we evaluate its effects on consumer satisfaction.

Customer

According to Winer (2001), a customer is a person or organization that buys goods or services from another firm. Customers are crucial to businesses because they generate income; without them, they would cease to exist. All organizations compete with one another to draw clients, whether through aggressive product promotion, price reductions to increase clientele, or the creation of distinctive goods and experiences that clients adore. Customers are very important to our research since we are determining how satisfied they are.

Customer satisfaction

Customer satisfaction is a metric that measures a company's customers' level of satisfaction with its goods, services, and capabilities. Information about customer satisfaction, such as surveys and ratings, can assist a business in deciding how best to adjust or improve its goods and services (Angelova and Zekiri, 2011).

Customer service

According to Turban *et al.* (2002), client service is a collection of behaviors that give the impression that a product or service has satisfied the needs of the customer. Customer service may or may not be significant, depending on the sector, the consumer, and the good or service. For these relationships to be successful, staff members "who can alter themselves to the personality of the guest" are essential.

Assimilation Theory

Festinger's (1957) dissonance theory is the foundation of assimilation theory. According to the dissonance theory, buyers compare how well a product performs against their expectations for it cognitively. Assimilation theory, a viewpoint on consumer post-usage evaluation, was first presented in the literature on customer satisfaction. Anderson (1973) asserts that consumers try to prevent dissonance by changing their views of a particular product to make it more consistent with their expectations. Additionally, customers can lessen the tension brought on by a mismatch between expectations and actual product performance by either changing expectations to match actual product performance or by increasing satisfaction by downplaying the relative significance of the disconfirmation they experienced.

Contrast Theory

Hovland, Harvey, and Sherif were the first to introduce contrast theory (1987). Contrast theory is described by Dawes *et al.* (1972) as the propensity to emphasize the differences between one's own attitudes and the attitudes expressed by opinion statements.

Contrast theory offers a different perspective on the customer post-usage evaluation process than assimilation theory did because post-usage evaluations result in predictions that are in direct opposition to those made about how expectations will affect satisfaction. Contrast theory contends that a surprise effect occurs, causing the gap to be enlarged or exaggerated,

whereas assimilation theory maintains that customers would attempt to reduce the difference between anticipation and performance.

According to the contrast hypothesis, any discrepancy between experience and expectations will be highlighted in the opposite direction. The goods or service would be rejected as wholly unsatisfactory if the company increases expectations in his advertising and then a customer's experience is only marginally less than that promised. On the other hand, if you overpromise in your advertising and under deliver, positive disconfirmation will also be exaggerated.

Theory justification

The two theories indicated in the study aims at making sure that the expectations of customers that is being ironing out the existing banking a problem such as queue lines in the bank and availability of service mobility is met by the bank, the theory aims at making sure the perceived banking performance is met. Contrast theory guides the expectation of mobile banking technology promise to be delivered so that the bank would be able to deliver customer satisfaction.

Empirical Review

The effect of deposits, withdraws and transfers of mobile banking technology on customer satisfaction

Ndyamuhaki (2020) conducted a study about the effectiveness of agency banking in Uganda in Africa. The study employed a cross-sectional research design to collect information from 205 employees by using simple random sampling. The findings indicate that employees agreed that the introduction of agency banking direct contributes to cost reduction of the customers when accessing banking services. Nowadays someone can get banking services in every agents authorized to provide such a services like, Bill payments, Account opening, Balance checking deposits and cash withdrawing.

Nyagadza (2019) carried out a study in Zimbabwe about the conceptual model for financial inclusion development through agency banking in competitive markets. The study used a mixed approach whereby a -cross-sectional research design was adopted to collect information from managers, bankers and account holders or customers. The findings revealed

that financial inclusion needs to be aligned with the cooperate needs and processes to help deliver customer or depositor promises.

The effect of mobile banking services provision affects the customer satisfaction

The study was done at the CRDB Nyanza branch in Mwanza in order to gauge how satisfied consumers were with CRDB SimBanking services (Magoma, 2019). Because it is one of the financial institutions offering SimBanking services and is situated in the heart of Mwanza City, the CRDB Nyanza branch was selected. It was done using the SERVQUAL paradigm, which has five components: tangibility, reliability, responsiveness, assurance, and empathy. 100 CRDB clients who use the company's SimBanking services were chosen using the convenience sampling technique. A 22-item self-administrated SERVQUAL Model-based questionnaire.

SPSS was used to analyze the results. Regression analysis, correlation, and Cronbach Alpha are quantitative analytical methods that were fully utilized. The results showed that reliability ($R^2 = 50.2$) was the best predictor of customer happiness, followed by assurance ($R^2 = 28.2$), tangibility ($R^2 = 25.4$), responsiveness ($R^2 = 12.7$), and empathy ($R^2 = 12.7$) (9.5). The study advises CRDB as an organization to enhance its services by emphasizing empathy and enhancing its client care.

The cost of mobile banking services and customer satisfaction

Magesse (2020) conducted a study specifically on the impact of agency banking uses on the financial performance of NMB banks in Tanzania. The study employed a case study research design to collect information from 61 respondents. The study revealed the following impacts of agency banking on financial performance such as; deposits, customer accounts and financial transactions.

Kuboja (2020) conducted a study about the impact of agent banking on profit maximization for commercial banks in Tanzania. The study adopted a qualitative approach whereby case study researches design by using CRDB bank PLC data from the year 2014 to 2018. The findings show that there is an insignificant positive relationship between agent banking and profit maximization. Also, the findings indicate that the increase in agent banking branches and increase in withdrawal transactions had a positive impact to profit maximization.

Methodology

The research was conducted in Dodoma city because of the number of CRDB branches increase as the rate increase of the number of customers. Therefore, this study was conducted in Dodoma city as to deliver the effect of mobile banking services on customer satisfaction. The study employed the cross-sectional research design so as to rather a large amount of data in a short research period. Out of 500 clients who use mobile banking services weekly, the researcher chosen 84 respondents to do this work effectively and efficiently.

Both primary and secondary data were employed in this study. In this study data were collected by using mainly three ways for primary data, the first is the face-to-face interview which enabled me to collect data primarily from individuals at the bank and off the bank, the second method is a fair and reliable amount of questionnaire which employed to different individuals to obtain data, and field survey method which enabled the researcher to observe and obtain data that helped the researcher to get answers for my research problem and for secondary data, collected data from various books, journals, and the internet.

The researcher filtered all the surveys after gathering the data. This made it possible for the researcher to verify the items' correctness and prevent mistakes and omissions. The materials are then coded by the researcher in preparation for analysis. Charts and tables were used to display the results of the descriptive statistics used to analyze the data, such as mean, weighted average, and standard deviations. Binary logistic regression was used to show the effect relationship between dependent and independent variables.

The following study encountered some solved limitations during the period of data collection and analysis. One of those limitations is transportation and material costs and time to reach the expectations of this study as per CBE guidelines. The researcher accommodates these limitations buy using his own costs and he budget so that all necessary services and materials were accommodated. Another expected limitation is data analysis expertise. The researcher needed to find an expert who is well capable in statistics so that the information collected leads to the desired output.

Findings And Discussion

Out of 500 respondents, 84 were chosen as using mobile banking technologies. Out of this sample, 80 respondents were able to complete the questionnaires; thus, 98 percent of the

population responded. The characteristics of respondents in this study were examined in terms of gender and age distribution, education qualification and experience.

Gender of Respondents

Findings in Table 1 revealed that majority of the respondents in Dodoma city by (55%) were male while (45%) were female. These findings show that more males participate in the study more than female, this finding is similar to that of Shaban (2014) whom also sorted out the same case. These findings show that the male uses mobile banking technology much more than the females at CRDB Plc. And those males are more adaptable to technology more than females.

Table 41: Distribution of respondents by gender (n=80)

Gender	Frequency	Percent (%)
Male	44	55
Female	36	45
Total	80	100

Age of respondents

The findings showed that 24, or 30.0percent of respondents, were between the ages of 18 and 28. This was followed by the 29–37 age group, which had 22 respondents and represented 27.5 percent of the total respondents, and the 38–47 age group, which had 11 respondents and represented 13.8 percent, followed by 48-57 years who were 10 representing 12.5 percent and lastly 58 and above years who were 13 respondents representing 16.3 percent. This is shown in Table 2 below. The findings represents that a large number of mobile banking technology adapters are from the age of 18-37 years old these finding allied with that of Kipchaui (2018),which shows a middle aged respondents are more adaptable to technology than old aged respondents.

Table 42: Age distribution of respondents

Age	Frequency	Percent
18-28	24	30.0
29-37	22	27.5
38-47	11	13.8

48-57	10	12.5
58 above	13	16.3
Total	80	100

Education Level of respondents

The respondents' educational background was the next sample variable to be looked at. According to the analysis, respondents had a range of educational backgrounds, including individuals with no formal education, primary and secondary schooling, as well as degrees, master's degrees, and other higher professional degrees. The analysis shows that 7 respondents were not educated, 6 only attended primary school. 8 respondents went to secondary school, 20 have diplomas, 14 have degrees, and 9 have master's degrees or other advanced professional degrees. The analysis's findings are shown in Table 3 below along with the percentage of respondents.

Table 43: Education level of Respondents

Education level	Frequency	Percent
Not educated	7	8.8
Primary	6	7.5
Secondary	8	10.0
Certificate	16	20.0
Diploma	20	25.0
Degree	14	17.5
Masters	9	11.3
Total	80	100.0

Period with the Bank

The study also examined the length of time that respondents had used the bank's services; this time was separated into four categories: less than a year, 1 to 5 years, 6 to 10 years, and more than 10 years. The results show that a significant portion of respondents have between 1 and 5 years of bank experience, which may support the study's reliability with the use of modern technologies. Table 4 below lists the findings of the analysis.

Table 44: Period with the Bank

Years at the bank	Frequency	Percent
less than 1 year	16	20.0
1-5yrs	37	46.3
6-10yrs	18	22.5
More than ten years	9	11.3
Total	80	100.0

Banking transactions

There are a number of factors influencing the use of CRDB plc mobile banking in different parts of the country. But in Dodoma the respondents mainly highlighted the following factors to be the key influencing factors for the use of mobile banking services, these factors are easy of transferring funds between accounts, easy in bill payments, Daily access to bank statements, Privacy in making bank transactions and avoidance of bank queue line. The analysis found that 18 respondents corresponding to 22.5 percent argued that it was easy to transfer funds between accounts, 24 respondents corresponding to 30 percent argued that it was easy to pay different bills with mobile bank technology, 10 respondents corresponding to 12.5 percent argued that it is reliable to access bank statements, 7 respondents corresponding to 8.8 percent argued that it promotes privacy in making transactions and 21 respondents corresponding to 26.3 percent argued that it avoids banking queue line. The analysis is simplified and presented in table 5 below. From the findings above it shows that the mobile banking technology offered by CRDB plc has great variety of services offered to their customers and hence increases their satisfaction by giving a wide range of services. This analysis proves to be in line with that of Shaban (2014) which states that “variety of banking services increases customer satisfaction range”.

Table 45: Banking transactions

Banking transactions	Frequency	Percent
Easy to transfer funds between accounts	18	22.5
Easy to pay different bills	24	30.0
Access to bank statements	10	12.5
Privacy in transaction	7	8.8
Avoidance of banking queue line	21	26.3

Total	80	100.0

The Effect of Volume of Mobile Banking Transactions on Customer Satisfaction

Deposits

The findings as indicated in Table 6 revealed that deposits is positive significant related to customers satisfaction at $\beta = 0.958$ and p value= 0.001. This implies that at every 1 unit increase in deposits, customer satisfaction increases by 0.958 times. This is also indicated by the odd ratio of 2.605 which implies that having deposits is 2.605 likely to increase customer satisfaction more than having no deposits. This analysis proves to in line with that of Shaban (2014) which states that “variety of banking services increases customer satisfaction range”.

Withdraws

The findings as indicated in Table 6 revealed that deposits is withdraws significant related to customers satisfaction at $\beta = 2.092$ and p value= 0.025. This implies that at every 1 unit increase in withdraws, customer satisfaction increases by 2.092 times. This is also indicated by the odd ratio of 8.098 which implies that having cash withdraws is 2.605 likely to increase customer satisfaction more than having no cash withdraws.

Transfers

The findings as indicated in Table 6 revealed that transfers is positive significant related to customers satisfaction at $\beta = 1.008$ and p value= 0.015. This implies that at every 1 unit increase in transfers, customer satisfaction increases by 1.008 times. This is also indicated by the odd ratio of 2.739 which implies that having cash transfers is 2.605 likely to increase customer satisfaction more than having no cash transfers.

Table 46: Binary logistic results of Volume of Mobile Banking Transactions on Customer Satisfaction

	B	S.E.	Wald	df	Sig.	Exp(B)
Deposits	.958	.667	2.063	1	.001	2.605
Withdraws	2.092	1.044	4.017	1	.025	8.098
Transfers	1.008	.502	4.027	1	.015	2.739
Constant	-12.854	3.922	10.740	1	.001	.000

The Effect of Mobile Banking Services Provision on Customer Satisfaction

Fund transfer between accounts

The findings as indicated in Table 7 revealed that fund transfer between accounts is positive significant related to customers satisfaction at $\beta = 0.101$ and p value = 0.044. This implies that at every 1 unit increase in fund transfer between accounts, customer satisfaction increases by 0.101 times. This is also indicated by the odd ratio of 1.107 which implies that having fund transfer between accounts is 1.107 likely to increase customer satisfaction more than having no fund transfer between accounts.

Bill payment

The findings as indicated in Table 7 revealed that bill payments is positive significant related to customers satisfaction at $\beta = 0.947$ and p value = 0.011. This implies that at every 1 unit increase in bill payment, customer satisfaction increases by 0.947 times. This is also indicated by the odd ratio of 2.578 which implies that having bill payment is 2.578 likely to increase customer satisfaction more than having no bill payment.

Order for cheque books and bank statements

The findings as indicated in Table 7 revealed that order for cheque books and bank statements is positive significant related to customers satisfaction at $\beta = 0.077$ and p value = 0.010. This implies that at every 1 unit increase in order for cheque books and bank statements, customer satisfaction increases by 0.077 times. This is also indicated by the odd ratio of 1.080 which implies that having order for cheque books and bank statements is 1.080 likely to increase customer satisfaction more than having no order for cheque books and bank statements.

Table 47: Binary logistic results on Effect of Mobile Banking Services Provision on Customer Satisfaction

	B	S.E.	Wald	df	Sig.	Exp(B)
Fund transfer	.101	.311	.106	1	.044	1.107
Bill payments	.947	.371	6.501	1	.011	2.578
Order for cheque	.077	.319	.058	1	.010	1.080
Constant	-5.626	1.435	15.370	1	.000	.004

The Effect of Cost of Mobile Banking Services on Customer Satisfaction

Cost of acquiring mobile banking system

The findings as indicated in Table 8 revealed that cost of acquiring mobile banking system is positive significant related to customers satisfaction at $\beta = 0.798$ and p value= 0.032. This implies that at every 1 unit increase in cost of acquiring mobile banking system, customer satisfaction increases by 0.798 times. This is also indicated by the odd ratio of 2.220 which implies that having order for cost of acquiring mobile banking system is 2.220 likely to increase customer satisfaction more than having no cost of acquiring mobile banking system.

Price of mobile banking service

The findings as indicated in Table 8 revealed that order for price of mobile banking service is negative significant related to customers satisfaction at $\beta = -0.691$ and p value= 0.047. This implies that at every 1 unit increase in order for price of mobile banking service, customer satisfaction increases by -0.691 times. This is also indicated by the odd ratio of 0.501 which implies that having price of mobile banking service is 0.501 likely to decrease customer satisfaction more than having no price of mobile banking service.

Table 48: Binary Logistic Results on Effect of Cost of Mobile Banking Services on Customer Satisfaction

	B	S.E.	Wald	df	Sig.	Exp(B)
Cost of acquiring mobile banking system	.798	.373	4.577	1	.032	2.220

Price of mobile banking service	-.691	.347	3.956	1	.047	.501
Constant	-2.103	.653	10.373	1	.001	.122

Conclusion and Recommendations

Conclusion

With regard to the findings above it, can be concluded that the introduction of mobile banking technology by CRDB plc. has increase customer satisfaction by a large margin since the bank was able to attain the major factors affecting satisfaction being customer care, service cost, service quality, technology applied, reliability and accessibility for the customer each has his own expectation from the service so as to be satisfied, furthermore the bank still needs to adjust the cost structure of this service since the cost analysis of this study shows that a majority of respondents argues that the cost of this service are higher than those of other banks while some argues that the cost are the same that those of other banks this might prove to be a problem since the customers can move from that bank to the other easily.

Recommendations of the study

Based on the findings, the following recommendations were put forward in order to improve customer satisfaction for CRDB plc. bank and reach a higher customer satisfactory rate; CRDB plc bank should increase investment in mobile banking technology since it provides a high range of customer satisfaction and so more and more customers will increase just to enjoy the attributes of mobile banking technology. CRDB plc. bank should provide trainings on how to us mobile banking technology since some of its customers are not educated at all, so it will enable them to adapt easily and spread the education to other customers.

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The Effects of Credit Reference Bureau Procedures on Performance of Loan Portfolio Among Listed Commercial Banks in Tanzania.

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Abstract

Financial institutions are facing an enormous risk of non-performing loans, noting that larger loans have greater risk exposure to overcome this challenge, an institution is required to monitor the behavior of borrowers thus the idea of establishing Credit Reference Bureau (CRB); This study is going to assesses the effect of credit reference bureau Procedures on performance of loan portfolio among listed commercial banks in Tanzania. Cross-sectional research design was adopted in this study where both quantitative and qualitative were used to capture data through questionnaire and interview method based on 95 respondents from selected banks. The study found that procedure to accessing loans had a positive and significant relationship with the loan portfolio performance at selected listed commercial banks in Tanzania as indicated with a P-Value of 0.000 which is less than 0.05. A coefficient of 0.835, loan approval procedures was positively ($\beta=.789$) associated with loan portfolio performance which was significant with a p-value of less than 5% ($p =0.001$) Also quality control procedures was positively ($\beta=.768$) associated with loan portfolio performance which was significant with a p-value of less than 5% ($p <0.002$). In conclusion with the use of Credit Bureau its services, banks and other credit providers may assess potential clients, keep track of how well they're doing, and handle any debts they might have racked up. Finally, its recommended to the government of Tanzania should work closely with the listed financial institution on legal requirement specifically policy and procedures that will help to screen and

monitor the client from the initial stage of loaning, performance screening by the aid of Reference Bureau Procedures so as to improve decision in provision of loan.

Key word: Credit, Bureau, Loan, Portfolio

Introduction

A credit reference agency, also known as a credit bureau, is a system that collects individual credit information from financial institutions with which they have a relationship. The data is aggregated, and the resulting report information is made accessible to contributing businesses upon request for credit evaluation and rating reasons (Alloyo, 2013). Credit Reference Bureau (CRB) accumulates financial information from numerous sources and delivers consumer credit information on distinctive consumers for a number of functions (Chandler, & Coffman, 2010).

The concept of credit reporting agencies was exercised in the 1860s in the US by merchants who needed to keep track of their customers who were suspected not to be credit worth. With the advance of technology and growth of commerce, companies that dealt with collecting credit data improved (Sullivan et al, 2003).

In Africa, Credit Reference Bureau (CRB) Africa (Commonly known as CRB Africa) set foot in Africa to address the high rates of defaults that threatened Multinational Banks operating in the African states, by offering credit rating services and information sharing (CRB Africa website). CRB Africa specializes in the establishment and operations of "Closed User Group" Credit Information Sharing Mechanisms for the Financial Sectors in Africa, carefully designed to comply with the relevant confidentiality regulations (Tumusiime-Mutebile, 2011)

In East Africa, Uganda was the first country in the EAC to have a private credit bureau, which began operation in May 2008 under the Compuscan Company. In his speech, (Tumusiime-Mutebile, 2011) the Central Bank of Uganda Governor pointed that all supervised financial institutions i.e., commercial banks, credit institutions and deposit taking microfinance institutions are participating. In Kenya Credit Reference Bureaus concept was given a statutory basis and legal recognition by the Banking Credit Reference Bureau Regulations, 2008 published. The regulations provide for the licensing and supervision of Credit Reference Bureaus by the Central Bank which is a closed user group for credit information sharing for institutions (Ng'ang'a, 2015).

In Tanzania, the first licensed and operational credit reference bureau was Credit info Tanzania that received its operational license from the Bank of Tanzania in June 2013. Its core business is information in relation to credit, offering services to cover each stage of the customer life cycle. Its services help banks and other credit providers to evaluate prospective customers, monitor performance of existing ones and manage the debts that they may have incurred. They collect data from as many sources as possible, transform it into intelligence and make it available to subscribers who have a rightful reason to use it for business decisions. These services are availed in accordance with the relevant legal framework provided by the Bank of Tanzania (Credit info Tanzania Limited, 2021).

Additionally, CRBs assist the financiers to evaluate the credit worthiness, the capability to reimburse a loan, the effect of the interest rate and other footings of the loan. Prospective financial institutions access the information only when they have approved grounds as stipulated by the law in order to define the creditworthiness of the borrowers (Sullivan, &Sheffrin, 2013).The Banking (Credit Reference Bureau) Regulations, 2008 provides that the information to be shared among the banks is any customer information concerning their customers' non-performing loans (NPLs) as well any other adverse information relating to a customer (negative information) (Alloyo, 2013).

On the other hand, listed commercial banks refer to backs that have issued shares of its stock through an exchange, with each share representing a sliver of ownership of the commercial bank. Those shares can then be bought and sold by investors, rising or falling in value according to demand. The commercial bank must apply to an exchange to be listed (Kenton, 2022).

Financial institutions mobilize funds from the public and place them in financial assets such as deposits, loans and bonds rather than tangible property. Majority of financial institutions have engaged in lending and savings mobilization and have played a significant role in providing various lending and savings services and products (Namara, 2011). Despite the crucial role, lending is continuously a challenging proposition, where legal/judicial enforcement is weak, where information about ability and willingness to repay applicants is not readily available also many of whom have never before borrowed and cannot pledge

collateral to guarantee repayment (Navajas, Conning, & Gonzalez-Vega, 2003; Conning & Udry, 2007) as adopted by (Alloyo, 2013).

Effective credit reference bureau plays a very big role in risk management and improves decision-making by collecting information about clients' credit history and other financial data (Gaitho, 2013). Before the introduction of CRB, lenders faced challenges in assessing the credit risk of potential customers which made credit decisions by lenders both less quick and risky, as lenders had no ready access to the credit history of potential borrowers (Clyde&co, 2013).

Recently CRB has received interests globally as Beck (2007), asserts that increased information sharing through CRB allows for more informed credit risk assessment, improves access to credit for groups that have been traditionally underserved, enables greater and broader access to capital for small businesses, entrepreneurs and enables better lending decisions with lower rates of default. Existence of credit reference bureau (CRB) leads to a bigger credit market, lower default and interest rates, improved profitability and increased competitiveness within the industry (Alloyo, 2013).

According to Kasanda *et al.*, (2013), in Tanzania, the CRBs have enabled lenders to assess the credit risk of potential customers. This has made credit decisions by lenders both quicker and less risky, since lenders have ready access to the credit history of potential borrowers. It applies to both corporate and individual borrowers, expected has particular impact on personal lending and in particular in the microfinance market, where lenders may not have access to the financial statements or the borrowing and saving history of borrowers in the same way as for corporate loans or loans to existing customers of the mainstream banks.

Due to that, it has attracted scholarly attention where several studies have been carried out on the impact of credit reference bureau reports such as; Shisia, *et al.*, (2014), Ng'ang'a (2015), Murimi, (2017), Ochieng (2018) just to mention a few noted that CRB had a negative effect on loan performance and non-performing loans. Despite the above findings and conclusions from the reviewed studies, there is limited information and research regarding the impact of credit reference bureau reports on loan portfolio performance of listed commercial banks in Tanzania much as financial institutions in Tanzania continue to grapple with deteriorating quality of their loan books. Some banks such as Tanzanian Women's Bank, China

Commercial Bank that was placed under statutory administration following the institution's failure to meet capital adequacy requirements and inability to affect the restoration.

Other banks that have experienced failures including Delphis Bank in 2003, Karadha Company Ltd in 2000, First Adili (T) Ltd, and Bank Ltd in 2000 (Ernst & Young, 2021). With little or no studies carried out in Tanzania's perspective on assesses the effect of credit reference bureau on loan portfolio performance, this study therefore sought to fill the knowledge gap by examine the effect of credit reference bureau Procedures on performance as a strategic control measure and its influence on the loan portfolio performance among the listed commercial banks in Tanzania.

The Specific Objectives of the study included;

- i. To examine the effect of information sharing on performance of loan portfolio among listed commercial banks in Tanzania.
- ii. To determine the effect of effective screening of customers on performance of loan portfolio among listed commercial banks in Tanzania.
- iii. To examine the effect of Credit Reference Bureau Procedures on performance of loan portfolio among listed commercial banks in Tanzania

Literature Review

Wairimu (2013), assessed the effect of credit reference bureaus on the level of nonperforming loans in commercial banks in Kenya. The researcher adopted regression analysis method. The researcher used t-test to analyse: there is no positive significant effect of credit reference bureaus on the level of nonperforming loans in commercial banks in Kenya. The study found that CRBs had an effect on NPLs; there was an average reduction of 4% on the level of NPLs in the years after the introduction of CRBs i.e. 2010-2012 and then null hypothesis was rejected; there was positive significant effect of CRBs on the level of NPLs.

Kago (2014) investigated the effect of credit reference bureau service on financial performance of deposit taking microfinance institutions in Kenya. The study used event analysis to show return on assets on pre and post CRB implementation in 2009 which were presented on a graph and table for a period of 2 years before and 5 years after. The study employed linear regression model equation (2) to test Return on Assets and total number of defaulters at the CRBs per year. The study found strong credit information sharing is

therefore essential not only to individual prosperity, but also to a country's overall economic growth. The study established that financial performance is rated with credit information sharing with the latter causing the former. intuitions as well as non-bank entities retailers, telecom and utility companies access to credit history of borrowers so as to know which clients to serve and what differential price to charge to cover risks.

Kimani (2015) aimed to determine the impact of credit reference bureaus as a strategy on the level of loan performance in Commercial Bank of Africa. This was case study research. The study made use of both primary and secondary data. The study found that CRBs are used for providing a person's or entity's credit history, sharing credit information analysis, storing and dissemination of information from lenders on borrowers' loans, generating reports for borrowers upon request, helping in identification of serial credit defaulters and providing credit rating or scoring of a customer. The operational costs incurred in performing due diligence tasks should generally transferred to their customers directly or indirectly (Kimani N, 2015).

Osoro, et al (2015) aimed at investigating credit reference bureau and its influence on the performance of banks in Eldoret, Kenya during the period 2005-2011. The study found that there was high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. From the study, it was also found out that, most of the secured loans, that is, the loans with collateral were the long-term loans at 96%. The findings further shows that 1 year after a default occurs on average 48% of the sample's exposure at default was recovered, 2 years after a default on average 62% of the sample's facility exposure was recovered. On average the biggest portion of recovery was gathered in the first year after a default and is decreasing each year (Osoro, Nyolei&Rotich, 2015).

Credit rationing theory: was introduced by Freimer and Gordon (1965) and comprehensively by Stiglitz and Weiss (1981). According to the seminal Stiglitz and Weiss (1981) paper, unsatisfied agents are borrowers. Asymmetric information leads to credit rationing, as lenders cannot distinguish between high quality and low-quality borrowers. However, this dominate view is not without criticism. In particular, De Meza and Webb (1987) vigorously contest this result. They show that asymmetric information in credit markets can lead to the inverse result, which is an excess of credit (over lending). Banks exist because they screen and monitor borrowers more efficiently than other investors can (Allen and Santomero, 1998).

They are specialized in gathering private information and treating it (Freixas and Rochet, 1999). Managing money and deposit accounts, banks own highly strategic information on firms' receipts and expenditures as well as the way that firms develop (Diamond and Rajan, 2001).

The more interesting form of credit rationing is equilibrium rationing, where the market had fully adjusted to all publicly, i.e., why banks ration credit free, available information and where demand for loans for a certain market interest rate is greater than supply. Stieglitz and Weiss (1981) proved that credit rationing occurs if banks charge the same interest rate to all borrowers, because they cannot distinguish between borrowers and screening borrowers perfectly is too expensive. Both assumptions are very simplifying and do not occur in this manner in the real world. Banks are usually able to distinguish their borrowers up to a certain degree. Moreover, banks face more than only two types of borrowers. Banks usually charge more than just one interest rate to all customers. High-risk borrowers pay a higher interest rate and credit rationing is less likely. However, banks cannot distinguish borrowers perfectly and screening them perfectly is impossible. Thus, credit rationing may occur.

According to Stieglitz and Weiss (1981) adverse selection and thus credit rationing still occurs if banks require collateral. They argue that low-risk borrowers expect a lower rate of return on average. Thus, they are less wealthy than high-risk borrowers on average after some periods. Low-risk borrowers are therefore not able to provide more collateral. Increasing collateral requirements may have the same adverse selection effect as a higher interest rate. Instead, Bester (1985) argues that banks only offer contracts in which they simultaneously adjust interest rates and collateral requirements. The Credit Rationing Theory was applicable to this study since it proved that asymmetric information that leads to credit rationing, as lenders cannot distinguish between high quality and low-quality borrowers were avoided. With banks existing due to screening and monitoring borrowers more efficiently through gathering private information, this created a platform to find out whether information sharing, effective screening of customers and Credit Reference Bureau Procedures has effect performance of listed commercial banks in Tanzania.

Methodology

The target population in this study included 95 staffs from selected listed commercial banks in Dodoma city (CRDB Bank, NMB, and DCB). The CRDB Bank, NMB, and DCB

employees were selected; A cross-sectional researcher design were used to gathered both quantitative and qualitative information related to impact of credit reference bureau reports on performance at one point of time where This was a suitable design to be used for since the study was a population-based survey and it is relatively faster and inexpensive.

The study employed stratified sample technique to select respondents. The stratification was based on departmental professional, from each stratum the proportional random sampling was employed to select respondents. On the other hand, purposive sampling was employed to select key informants. The key informants included top managers of selected listed commercial banks in Tanzania. Purposive sampling was used because it provides opportunity to focus on particular characteristics of the population that are of interest, which best enabled the researcher to answer their research questions.

Both open ended and closed ended questionnaire were used since it could be a bit difficult to learn about opinions and behavior without asking questions directly to people involved (Perez and Knell, 2005). In this study, data was collected using questionnaires. Detailed information about the respondents' awareness of the effect of credit reference bureau procedures on loan portfolio performance of selected commercial banks was obtained by the help of questionnaires list. The survey was constructed as an interviewer-administered questionnaire with rating and closed end questions (Saunders et al., 2009).

Secondly, interview method was used to gather opinions about the impact of credit reference bureau procedures on loan portfolio performance of selected listed commercial banks. Key Informants were interviewed by interview guides to provide more details on the subject matter. In-depth interviews were conducted to managers at CRDB Bank, NMB, and DCB. During the in-depth interviews the researcher led the interview by asking questions and recording the responses from the interviewees.

Secondary data was obtained from studies from both published and unpublished documents obtained from respective websites of a reputable organization. Furthermore, search engines such as Google scholar was employed as a means of accessing information related to the effects of credit reference bureau reports on loan portfolio performance. Secondary data supplemented data obtained from primary sources

Both quantitative and qualitative analyses were used to carry out the study; Qualitative methods were used to capture in-depth information by a means of interviews guide and analyzed using content analysis where by different themes was developed based on theories and literature. On the other hand, Quantitative data were analyzed through multiple regression model was help to examine the effect of credit reference procedure reports on performance of loan portfolio among listed commercial banks in Tanzania, the multiple regression models was used.

The below regression model shown by equation was used:

$$(Y) = \beta_0 + \beta_1 \text{PrAcLo} + \beta_2 \text{QuCoPr} + \beta_3 \text{LoApPr} + \epsilon$$

Whereby:

Y=Performance of loan portfolio

PrAcLo=Procedure to Accessing Loans

QuCoPr=Quality Control Procedures

LoApPr=loan approval procedures

And ϵ = error term.

Finding and Discussion

The effects of CRB Procedures on performance of loan portfolio

The Multiple regression model was used to examine the effect of Credit Reference Bureau Procedures on performance of loan portfolio among listed commercial banks in Tanzania.

The study adopted a multiple regression analysis to determine the variation caused by the independent variables. These included; Procedure to Access Loans, Quality Control Procedures and loan approval procedures. The dependent variable loan Portfolio Performance at CRDB Bank, NMB, and DCB.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.714 ^a	.974	.374	1.780	.974	4.727	7	38	.000

a. Predictors: (Constant), Procedure to Accessing Loans, Quality Control Procedures and finally loan approval procedures.

Results from the Table 1 above indicate that the R- square was estimated at 97.4% indicating that the model was fit in explaining the variables. It has also established that the variation in loan Portfolio Performance at CRDB Bank, NMB, and DCB can be explained by the independent variables (Procedure to Accessing Loans, Quality Control Procedures and finally loan approval procedures) by 97.4 percent. This indicates that there were other variables that were not put into consideration that accounted for 2.6% of loan Portfolio Performance.

Table 2: Analysis of variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	83.323	8	43.887	4.727	.000 ^b
	Residual	49.548	74	14.462		
	Total	132.871	82			

a. Dependent Variable: Loan Portfolio Performance (Portfolio at Risk, Write-Offs and Provisions for Bad loans)

b. Predictors: (Constant), Procedure to Accessing Loans, Quality Control Procedures and finally loan approval procedures

ANOVA was applied to predict the significance of the regression model. From the table 2 above, it was found that the model was significant in linking Loan Portfolio Performance with the independent variables (Procedure to Accessing Loans, Quality Control Procedures and finally loan approval procedures) since the P-Value 0.000 was less than 0.05

Table 3: The effect of CRB Procedures on performance of loan portfolio.

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	17.452	6.081		.906	.037
	Procedure to Accessing Loans	14.238	14.698	.835	.954	.000
	Quality Control Procedures	14.422	9.505	.768	.829	.002
	Loan approval procedures	15.834	12.397	.789	.705	.001

a. Dependent Variable: Loan Portfolio Performance (Portfolio at Risk,
Write-Offs and Provisions for Bad loans)

Table 3; above the results showed that procedure to accessing loans had a positive and significant relationship with the loan portfolio performance at selected listed commercial banks in Tanzania as indicated with a P-Value of 0.000 which is less than 0.05. A coefficient of 0.835 was obtained as well implying that leaving other factors constant, a unit change in procedure to accessing loans would on average lead to an increase in the loan portfolio performance by 83.5%.

The study findings also show that, quality control procedures was positively ($\beta=.768$) associated with loan portfolio performance which was significant with a p-value of less than 5% ($p < 0.002$). This implies that the unit change in quality control procedures on average increased loan portfolio performance by 76.8%.

Finally, loan approval procedures were positively ($\beta=.789$) associated with loan portfolio performance which was significant with a p-value of less than 5% ($p = 0.001$). This implies that the unit change in loan approval procedures will on average increase of loan portfolio performance by 78.9%. From the key respondent's perspective as far as the effect of Credit Reference Bureau Procedures on performance of loan portfolio among listed commercial banks in Tanzania is concerned, interviewee 1 stated,

“.....as far as accessing loans is concerned in our bank, we have different procedures that have been fundamental in determining

whether the clients have the potential to pay their loan installments... ”.

Interviewee 2 stated that,

“we have procedures in place to help our bank to control quality and this has been helping in recovering loans in time.....”

Interviewee 3 stated that,

“well we have procedures in place and these have to be taken into account when it comes to assessing and approving the right clients to give loans..... ”.

Generally, from the study findings, Credit Reference Bureau Procedures (Procedure to Accessing Loans, Quality Control Procedures and finally Loan approval procedures) had a positive and significant relationship with performance of loan portfolio among listed commercial banks in Tanzania specifically CRDB Bank, NMB, and DCB. The findings concur with Osoro, et al (2015) who investigated credit reference bureau and its influence on the performance of banks in Eldoret, Kenya during the period 2005-2011 and found that there was high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. From the study, it was also found out that, most of the secured loans, that is, the loans with collateral were the long-term loans at 96%. More so, wholesalers were found to be the greatest defaulters with a default rate of 41.6% while mining companies and electricity, gas and water supply companies both had the least default rate of 0.9% each.

Conclusion and Recommendation

Reference Bureau Procedures had significant effect on loan Portfolio performance loan Portfolio Performance at CRDB Bank, NMB, and DCB. This signifies that usage of the credit reference bureaus has played a significant role as far as Loan Portfolio Performance (Portfolio at Risk, Write-Offs and Provisions for Bad loans) at CRDB Bank, NMB, and DCB is concerned. The government of Tanzania should work closely with the listed financial institution on legal requirement specifically policy and procedures that will help to screen and monitor the client from the initial stage of loaning, performance screening by the aid of Reference Bureau Procedures so as to improve decision in provision of loan

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Effect of Contract Administration Practice on Value for Money in Roads Construction Projects

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Abstract

The main purpose of the study was to assess the effect of contract administration practice on value for money in roads construction projects in Public sectors. The population of study included all staff working at TARURA and TANROADS in Dodoma whereby a sample size of 109 respondents were used. Respondents forming the sample size were obtained by using simple random sampling technique and specifically involved staff from Procurement Management Unit, Legal, Finance and Account, Engineering, and Monitoring/ Supervision departments. The study used purposive sampling technique to obtain key informants that facilitated in collection of qualitative data as a strategy to seek clarification and learn more about how contract administration affect value for money in construction projects. The key informants included 25 Staff and regarding data analysis, quantitative data were analyzed by using descriptive while qualitative data were analyzed using content analysis. The findings revealed that Contract administration issues including managing time, conducting site meeting and timely payments in contract implementation, supervision and monitoring and timely payments to contractors have a positive contribution to timely achievement of value for money in construction projects. The study concludes that contract administration practices should be observed from initial phase up to completion phase and public managers should think beyond compliance and focus in innovation to create value on contract execution. The study recommended that public entities should use standard documents and procurement guidelines that can enable better management of contracts, hence to contribute in attaining value for money in roads construction projects.

Key word; Contract Administration, Construction, Value for Money

Introduction

Statement of the Problem

Many governments have been implementing procurement reforms in an effort to lower the cost of what they purchase and speed up transaction times (Kadir, 2005; Krishna, 2005). According to Lysons, and Farrington (2006), the development of expertise, effective control mechanisms, and proper contract preparation are among the factors that public procurement bodies have identified as enhancing the performance of procurement initiatives towards the achievement of intended objectives. According to the perspectives of several researchers, a thorough structured procurement contract is one of the many factors that affect how well governmental organizations execute their procurement activities. The public procurement must be handled carefully in order to minimize loss of the available resources, time, and processes. (Deva Raj et al. 2012). Contract management is one of the crucial functions of procurement system in any public procuring entity, it is responsible for ensuring that all organization requirements are available at right time with reasonable prices and quality and thus enable realization of value for money. One of the efforts to improve contract management is procurement auditing which is carried out from time to time, the procurement audits have given more weights the aspect of contract management in terms of percentage score for last five (5) consecutive financial years (URT, 2016 to 2021). All this reveals how the aspect of contract management is very crucial in public procurement system.

Despite the various initiatives undertaken to enhance effective contract management and administration, yet there have been significant drawbacks in executing public procurement contracts. For instance, in Tanzania, it was reported that 19 public entities equivalent to 58% of total public entities which submitted their internal audit reports, indicated many weaknesses related to contract management which also resulted to cost overruns (URT, 2019). The weaknesses included execution of projects which were not approved by relevant authority; contract cost exceeded 15% the original contract value, poor contract record keeping, and delays in commencement of the contracts. As a result of the weaknesses revealed here above, corruption red flags was increased by 41% which is above the average of 20% (URT, 2019). In addition, it was reported that 32% of all public entities which submitted their internal audit reports had various weaknesses in the area of contract managements which were detrimental on value for money. The consequences of such weaknesses included charging of liquidated damages, delay in making payments to suppliers, unnecessary extension of project period (URT, 2021). Research studies carried out regarding

the areas of contract management have overlooked to address on the effect contract administration practice on achieving value for money in roads construction projects. Most of research studies have focused on assessment of the challenges on public procurement contract management process (Ivambi, 2016), Matto, 2017; Michael, 2020). The previous studies have not clearly researched the areas of contract administration practices, in roads construction projects. Therefore, this study tries to fill this gap in knowledge by assessing the effect of procurement contract administration on value for money in roads construction projects in Tanzania.

Literature Review

Public Value Theory

Public Value Theory was introduced by Mark Moore in 1995. Mark Moore refers public value to the link between inputs, outputs and outcomes prepared and offered by public entity. Moore, (1995) and Marendi, (2015) contest that Public Value Theory provide greater understand to public sector managers on the constraints, opportunities and the challenge to produce public valuable outcomes. Benington and Moore, (2011) insisted that this theory requires public sector managers to think beyond compliance and focus on innovation to create public value. This theory is relevant with regard to the proposed study due to the fact that, in order to practice effective management of roads construction contracts, those who are responsible with the management or supervision and or execution of such contracts should understand about the constraints like scarcity of fund available for implementation of roads construction projects, opportunities like guidance of PPA, Cap. 410 in ensuring effective contract management of construction projects and challenges available which surround the implementation of the construction projects contracts in one hand, while aiming to attain value for money in executing such construction projects contracts hence to add value to the Public Entity such as TARURA and TANROADS as the entities which deal with road construction projects. With that regard, Public Value Theory is of imperative when analyzing and assessing the link between contract management and achievement of value for Money. The role of the public sector managers whose ethical responsibility is to search for public value, eventually calls for innovative procurement framework (Turrell, 2017). In analyzing innovative procurement framework, the researcher pinpointed the contract management as among aspects of innovative procurement framework for creation of public value in which in this study is perceived as attainment of value for money.

Contract administration

Contract administration refers to the task or function of ensuring that a construction contract (the contract between the client and the contractor) is executed in accordance with the terms of the contract. The contract administrator may be a representative of either party or may be a third party, depending on the terms. Contract administration may include the tender stage and the post-construction stage. Contractual obligations include periodic site visits, responding to Requests for Information, issuing Architects Instructions, assessing progress claims and issuing progress certificates, contract price adjustments and assessing claims for adjustments of time. (<https://acumen.architecture.com.au/project/core-architectural-services/contract-administration>).

For the purpose of this study, the study was assessing issues of contract administration which have influence on value for money in roads construction projects.

Value for Money in Construction Projects

Value for money (VfM) means the maximum benefit from goods, works or services procured with the resources available worth the cost incurred (PPA, Cap. 410). Matto (2010), argued that VfM is understood and assessed using six aspects that is quantity delivery, quality delivery, timely delivery, cost delivery, fitness for the purpose, and item in use. With that point of views, the course of this study consider the expectations of the maximum benefits from the resources invested in the perspectives of quality, timelines, and attainment of the intended purpose in works construction projects as far as VfM is concerned.

Research Methodology

This study has employed a survey design because it enables the researcher to triangulate the findings through different data collection methods (John & Christensen, 2017; Creswell, 2012). The population of study included all staff working at TARURA and TANROADS in Dodoma whereby a sample size of 109 respondents were used. The respondents forming the sample size were obtained by using stratified sampling technique and specifically involved staffs and consultants who have been involved in performing roads construction projects in engineering, monitoring / supervision, and procurement divisions at TARURA and TANROADS entities; Also, the study used purposive sampling technique to obtain key informants that facilitated in collection of qualitative data as a strategy to seek clarification and learn more about how contract administration affect value for money in construction projects. The key informants included Staff from Procurement Management Unit, Legal,

Finance and Account, Engineering, and Monitoring/ Supervision departments and with regard to data analysis, quantitative data were analyzed by using Binary regression model to determine the relationship that exists between the variables while qualitative data were analyzed using content analysis. Quantitative data were collected through questionnaire and documentary review from available official documents for public use such as the Annual Performance Evaluation Reports of the Public Procurement Regulatory Authority and the Annual General Report of the Controller and Auditor General on the Financial Statements.

Findings

As shown in Table 1 the binary logistic model was used to analyze the appropriateness of the contract administration practices on value for money in roads construction projects. The dependent variables such are timely achievements, reasonable costs incurred and quality of the roads were measure using two responses of YES and NO with regard to value for money achievement.

Table 1. The Contract Administration Practices on Value for Money (VfM) in Roads Construction Projects

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Management of insurance and securities	-1.358	.487	7.777	1	.005	.257
Correspondences management	1.134	.495	5.252	1	.022	3.108
Project/service program adherence	-1.087	.477	5.189	1	.023	.337
Timely payments to contractors	1.139	.504	5.118	1	.024	3.125

Effect of Management of Insurance and Securities on Value for Money in Road Construction Projects.

The findings revealed that management of insurance and securities has negative significant influence to the reasonable costs $\beta = -1.358$ and statistical significant at 5% ($p\text{-value} = 0.005$). This is indicated by odd ration of 0.257 implying that management of insurance and securities is 0.257 times likely to decrease the attainment of value for money in roads construction projects in Tanzania. The findings were supported with qualitative data from one of the respondents who propounded that, the issue of insurance and securities is not wealth to

the reasonability of costs as they indirectly lead to the PEs to bear the costs of acquisition of such insurances and securities at the end of the day. In addition, in some cases they delay in implementation of construction projects as the law require that, before commencement of contract, contractors have to make sure that the secure such securities and insurances and submit to the PEs so as the PEs to be assured. The PEs has a lot of construction projects whereby they actually use a lot of money at the end of the day in order to attain the securities and insurances. Therefore, management of insurance and securities need costs to be incurred. When the researcher analyzed the findings and corresponding discussions here above, the results were found to reflect the contest of the theory of Public Value Theory which was adopted in reference to the aspects of the study. The theory contests that public sector managers to understand and be aware of the constraints, opportunities and challenges in projects implementations in order to produce public valuable outcomes. Likewise, the theory provided insight that public manager to think beyond compliance and focus on the innovation to create public value. Thus, the public managers such as the roads construction project implementing team should be keen to understand and analyzing such aspects in order to ensure attainment of Value for money.

Effect of Correspondences Management on Value for Money in Road Construction Projects.

The findings revealed that managing correspondences has a positive significant influence to value for money of constructed roads at $\beta=1.289$ and statistical significant at 5% ($p\text{-value}=0.011$). This is indicated by odd ratio of 3.628 implying that having correspondences management is 3.628 times likely to increase the attainment of value for money in roads construction projects in Tanzania. These results are in harmony with those of Almakari et al. (2017) who revealed that poor site management were revealed to be factors contributing to cost overrun for projects implementation in Yemen. The finding was supported with the clarifications from one of the respondents who is head of Monitoring/Supervision Unit, the respondent clarified that, although it happens when PEs need to implement the roads construction project in time, with reasonable cost and desirable quality, as the government institutions actually need to manage correspondences and to ensure that every activity in the construction projects is attained at a reasonable cost, quality and in time. Another interview from one of the respondents provided that, making site meeting and follow ups reduce the delay of the roads construction project. For instance, more than five (5) roads construction

projects where the intuition heads visited the sites, the projects were accomplished before the expected completion time of the projects.

Effect of Project/service program adherence on Value for Money in Road Construction Projects

The findings revealed that adherence project/service program has negative significant influence to the timely achievement $\beta = -1.087$ and statistical significant at 5% (p-value=0.023). This is indicated by odd ration of 0.337 implying that having quality assurance is 0.337 times likely to decrease the attainment of value for money in roads construction project in Tanzania. The finding above was supported with the clarifications from one of the respondents who is head of Monitoring/Supervision Unit, the respondent clarified that, making something quality need a lot of time in order to establishing the process. In construction industry adherence project/service program starts from the early stages of procurement process, therefore having project/service program assurance leads to delay of some roads construction projects, and in most cases the prepared project/service program may not be realistic as they have been prepared just to formalize the project implementation requirements.

Effect of Timely Payments to Contractors on Value for Money in Road Construction Projects

The findings revealed that timely payments to contractors has a positive significant influence to the reasonable costs $\beta=3.125$ implying that having time management is 3.125 times likely to increase the attainment of value for money through reasonable costs in roads construction projects in Tanzania. The aspect of timely payments to contractors on influence to attain Value for Money was supported by one of the respondents who is the head of one of the departments targeted by the researcher as key informants, that the matter of timely payments towards avoid of unnecessary costs including, charging of interest by contractors due to delayed payments. In addition, contractors are motivated to accomplish their contracts timely when they are paid timely since their financial flows are assured and not interrupt in programs. For instance a number of projects which were accomplished on expected time were observed to be attributed with timely payments to contractors.

Conclusion, Implications and Area for Further Research

Conclusion

The study concluded that as to achieve value for money in roads constructed projects, TARURA and TANROADS entities should ensure proper administration of contractual relationship protocols and effective controls for the appropriateness of procurement of work (contract) documents in roads construction projects. Also, it is ended that poor site management were revealed to be factors contributing to delay of some projects that means affecting value for money. Furthermore, the location in the same country tactical, auditing of projects and relational purchasing tools has impact on operational performance and the efficacy of purchasing practices does indeed vary depending on differences in geographical location.

Implications

The government through roads construction implementing entities is recommended that the contract administration practices should be observed and the public managers to think beyond compliance and focus in innovation to create value. Essential aspects of contract administration practices including managing time in contract implementation, conducting regular site meeting with construction project implementing team, effective contract supervision and monitoring and timely payments to contractors will ensure attainment of Value for money.

Area for further Studies

The researcher recommends further study on assessment of the challenges affecting the effectiveness of procurement contract management to realize value for money in roads construction projects in Tanzania.

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Impact of Foreign Direct Investment on Unemployment Rate in Tanzania: Granger causality approach

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Abstract

The paper Investigate the impact of FDI on Unemployment rate in Tanzania. The study employed time series data from 1991 to 2020 obtained from World Development Indicators and World Bank and Tanzania Bureau of Statistics. The study used Granger Causality approach to investigate the relationship between FDI and Unemployment rate. The study mainly investigates the long run causal-effect relationship between FDI and Unemployment rate in Tanzania. The results showed that there is no causal impact relationship between FDI and unemployment rate in Tanzania.

Keywords: foreign direct investment, unemployment rate, granger - causality.

Introduction

Granger causality is an approach that investigates causality between two variables in a time series. This method involves the use of empirical data sets to find patterns of correlation. Therefore, the Granger causality test is a statistical hypothesis test that determines whether one time series is useful in forecasting another (Rossi, 2013). Forecasting is imperative in our daily life as it predicts things in future. One of the macroeconomic indicators that can be predicted through forecasting is the unemployment rate. Unemployment is when an active person to work is unable to work not because of inability to work, but he/she could not find a suitable job.

The unemployment rate, therefore, quantifies the group of unemployed individuals (Desaling, 2016). According to Tanzania National Bureau of Statistics unemployment rate in Tanzania decreased to 9.30 percent in 2021 from 9.50 percent in 2020. In Tanzania perspectives, the unemployment rate measures the number of people actively looking for a job as a percentage of the labour force. Based in past years foreign direct investment (FDI) has played an

important role in supporting developing economies to participate in global trade by facilitating the flow of capital, talents, and knowledge.

Foreign direct investment (FDI) outperforms aid, remittances, and portfolio investments as the largest source of external financing in many countries. The investments create jobs, boosts productivity, and bring management expertise and technology. Moreover, FDI fosters better working conditions and environmental practices (Evenett and Fritz, 2021). In Tanzania, the foreign direct investment for 2020 was \$0.68B, a 43.73% decline from 2019. This study aims at studying the impact of foreign direct investment on unemployment in Tanzania using Granger Casualty approach for the yearly data from 1991 and 2020.

Many studies have been conducted to examine the effects of foreign direct investment and unemployment. Majority of the studies have shown that FDI decreases the rate of unemployment,

Also, some findings could be coincided as their results has shown that there is no causal relationship between FDI and unemployment or there is a negative relationship between them.

Irpan et. al (2016) examined the relationship between unemployment and foreign direct investment in Malaya using annual data spanning from 1980 to 2012. Their study found that foreign direct investment, number of foreign workers, and GDP significantly influence the unemployment rate in Malaysia. Mucuk and Demirsel (2013) investigated the relationship between foreign direct investment and unemployment for seven developing countries, namely Argentina, Chile, Colombia, Philippines, Thailand, Turkey and Uruguay by using the panel data analysis and panel causality tests performed by using yearly data from 1981 to 2009. The results showed that foreign direct investment and unemployment move together in the long run for all countries but it was also observed that although foreign direct investment increases unemployment in Turkey and Argentina, it reduces unemployment in Thailand.

However, causality tests only depict that there is a relationship from foreign direct investment to unemployment in the long run. Alalawneh and Nessa (2020). Investigated the impact of foreign direct investment on unemployment in six countries in the Middle East and North Africa, Egypt, Jordan, Lebanon, Morocco, Tunisia, and Turkey. Their study employed panel data using yearly data from 1990 to 2018, where three economic models were used to examine the impact of FDI on unemployment, male unemployment, and female

unemployment, in the long run, using the Fixed Effect Model (FEM) and Random Effect Model (REM). The results showed that FDI reduces the unemployment rate, the male unemployment rate, and the female unemployment rate in the long run. The results of the study also revealed that there is no causal relationship in the short term between FDI and unemployment in its various forms, while there is a bidirectional causal relationship between FDI and exports according to the three economic models.

Strat et. al (2015) analyzed the short run causal relations between the inflows of foreign direct investments (net inflows) and the unemployment rate for the latest thirteen member states of the European Union. The finding of the study shown that there is no Granger causality relation between the variables for six countries and a one direction causal relation was identified for the remaining ones.

Jayaraman and Singh (2007) in their study investigated the relationship between employment and foreign direct investment for Fiji through a multivariate modeling strategy by including GDP. The findings shown that unidirectional long run causality running from foreign direct investment to employment and a unidirectional causality running from foreign direct investment to GDP in the short-run.

Dritsakis and Stamatiou (2018) examined the causality relationships between foreign direct investments, exports, unemployment, and economic growth in the fifteen old EU members using panel data from 1970-2015. The fixed effect model was applied in order to estimate the panel VAR equations for Granger causality tests. The findings shown that three bidirectional causalities between economic growth and exports, exports and foreign direct investment, and exports and unemployment and three unidirectional causalities running from foreign direct investment to economic growth, foreign direct investment to unemployment, and from economic growth to unemployment. Utouh and Rao (2016) the study provided an analytical insight of foreign direct investment on employment creation in Tanzania, centering on manufacturing sector which is held as a conduit for social economic development. The yearly data from 1980 to 2012 used consisted of total employment, GDP and inward foreign direct investment.

The co-integration of the variables has been ascertained via application of Augmented Dickey Fuller Test and is found to hold in the long run. Also, the findings indicated that foreign

direct investment has a positive and significant effect on employment generation in Tanzania and GDP is translated to have influenced the economic growth.

In these previous studies no study examined the impact of foreign direct investment and unemployment in Tanzania by using Granger Causality Approach. Therefore, the findings of this study will be beneficial to the literature. It should also be observed that the relationship between FDI and unemployment differs from one country to another based on the economic structure of the country, type of foreign direct investment received in host country and period span to another.

Methodology and Data

Methods

This paper used a correlational design to determine the causal-effects relationship between two variables, as well as how strongly these variables relate to one another Kazdinn (1992). Furthermore, the research design is chosen because data is obtained from the international statistical publications in World Bank and World Development Indicators were used as data sources.

Model specification

Theoretically, there is no direct influence of FDI and Unemployment, there are other mediating factors that leads to indirect relationship between FDI and Unemployment. According to Knotek (2007), Okun's law may be related as follows:

$$\ln FDI = a + b \ln FDI + c UER + \text{error-term}$$

$$\ln UER = d + k \ln UER + z \ln FDI + \text{error-term}$$

The study applied Johansen (1988) as well as Johansen and Juselius (1990) Co-integration approach which in fact establishes long run relationship between variables. the data was analyzed using STATA to test if the FDI variable significantly affect the unemployment rate and vice versa.

Empirical results and Discussion

Data used in the study is annual data from the year 1991 to 2020 collected from World Bank and World Development Indicators. The analysis was first carried by testing if the involved

variables are stationary. In order to conduct such an analysis, the Augmented Dickey Fuller test was employed. The test was performed initially for the variables in level. However, for variables which were identified as non-stationary evolution, the test was applied again for the 1st difference. The obtained results are visible in Table 1. In the table we have listed the values obtained for the ADF test for each variable, both when performed in level and in the 1st difference.

The trend of FDI and Unemployment

Descriptive analysis by using time series line plot in stata was used to show the trend of the unemployment and FDI from year 1991 to 2020. In order to test for the impact of FDI on Unemployment rate, Unemployment rate was regressed as a function of FDI and in order to test Unemployment rate influence on FDI, FDI was also regressed as a function of Unemployment rate.

$$\ln \text{FDI} = a + b \ln \text{FDI} + c \text{UER} + \text{error-term}$$

$$\ln \text{UER} = d + k \ln \text{UER} + z \ln \text{FDI} + \text{error-term}$$

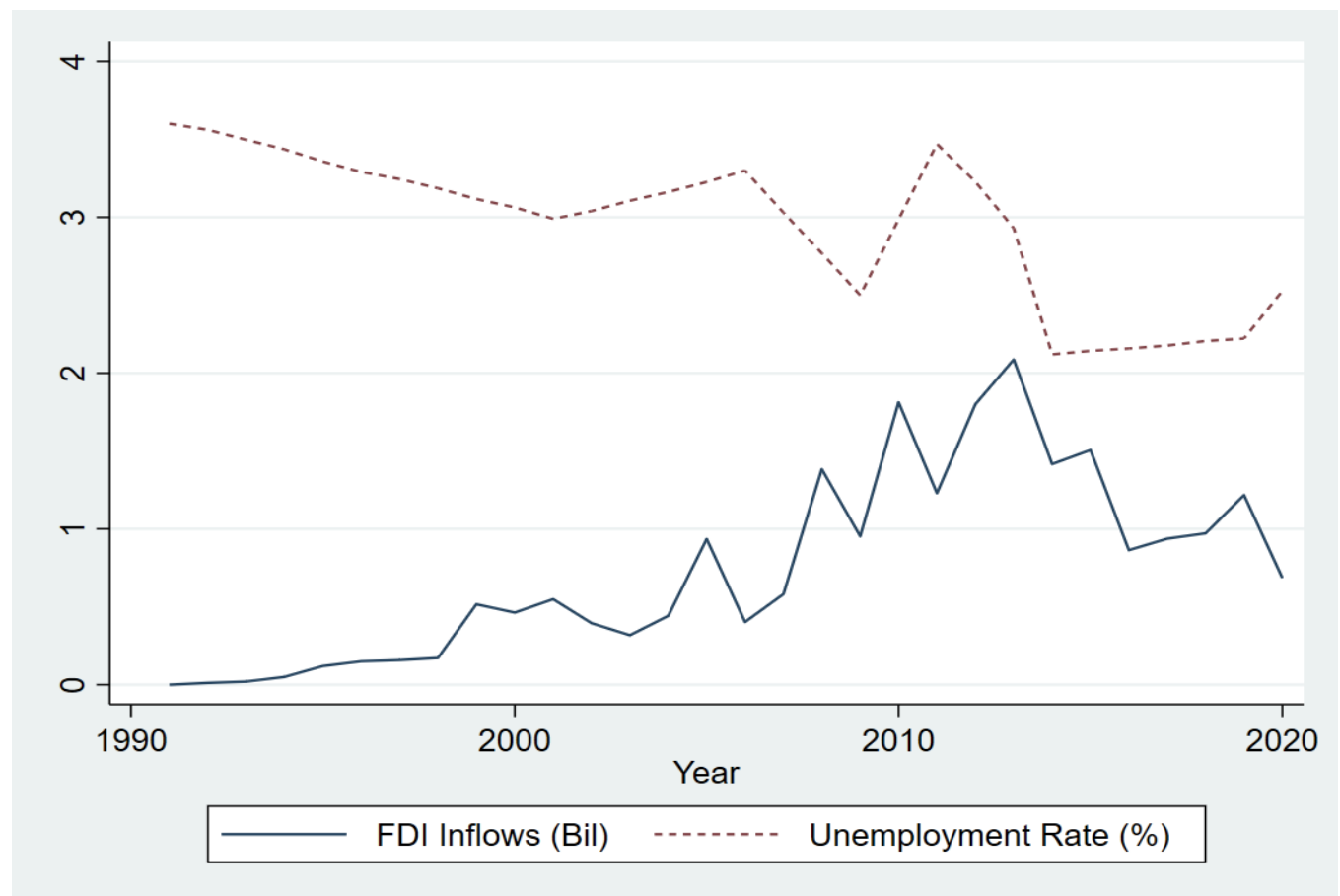


Figure 1: The trend of FDI and Unemployment in Tanzania

From Figure 1 the results show that, the trend of unemployment rate from year 1990 to 2020 had a decreasing trend with a sharp decline around year 2011 to 2015. On the other hand the trend of FDI inflows from year 1990 to 2020 had an increasing trend, with the sharp decline from year 2013 to 2017.

Augmented Dickey fuller for unit root test

In assessing stationarity of the FDI which was transformed into natural logarithm (lnFDI), the test statistics at 0.05 level of significance by MacKinnon approximate with two lags (lag 0 and lag 1), results shows that there is stationarity achievement when the lnFDI is at lag 0 making number of units being 29 while on lag 1, no achievement of stationarity for a unit root test is observed on the data collected from year 1990 to 2020. The results are shown in Table 1.

Table 1: Estimating the maximal integration order on lnFDI of lags 0 and lags 1 (n=29)

LnFD1	Test statistics	Lags and N	Dickey-Fuller critical value			MacKinnon Approximate p-value
			1%	5%	10%	
Z(t)	-11.543	Lag 0, N=29	-4.343	-3.584	-3.230	0.0000
	-3.034	Lag 1, N=28	-4.352	-3.588	-3.233	0.1229

Further in assessing stationarity on unit roots of the Unemployment rate which was transformed into natural logarithm (lnUER), the test statistics at 0.05 level of significance by MacKinnon approximate with two lags (lag 0 and lag 1), results shows that there is stationarity achievement when the lnUER is at lag 1 making number of units being 28 while on lag 0, no achievement of stationarity for a unit root test is observed on the data collected from year 1990 to 2020. The results are shown in Table 2.

Table 2: Estimating the maximal integration order on lnUER of lags 0 and lags 1 (n=29)

LnUER	Test statistics	Lags and N	Dickey-Fuller critical value			MacKinnon Approximate p-value
			1%	5%	10%	
Z(t)	-2.358	Lag 0, N=29	-4.343	-3.584	-3.230	0.4023
	-3.528	Lag 1, N=28	-4.352	-3.588	-3.233	0.0365

The optimal lags

Since the obtained results from lags diagnostic needs additional evidence to support the results, the LR, FPE, AIC, HQIC and SBIC were used as the basic criterion on assessing the best optimal lags to consider in both two variables at 4 degree of freedom and 0.05 level of significance. Results from Table 3 shows that the optimal lag following LR, HQIC and SBIC test, is achieved at lag 1 making the observation to be 28 while the AIC and FPE had an optimal result at lag 2 making the observation being 27.

**Table 3: Showing the optimal lags of endogenous variable lnFDI and lnUER (N=26)
Sample :1995 to 2020**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-17.3496				.015188	1.48843	1.5163	1.58521
1	13.8503	62.4*	4	0.000	.001878	-.603869	-.520265*	-.313539*
2	18.1143	8.5281	4	0.074	.001854*	-.62418*	-.48484	-.140297
3	20.5014	4.7742	4	0.311	.002136	-.500111	-.305034	.177326
4	22.0552	3.1076	4	0.540	.002664	-.311941	-.061127	.559049

* Optimal lag, Endogenous: lnFDI lnUER, Exogenous: _cons Source: Stata

Following the obtained results, the best optimal result is achieved at lag 2 but since there might be reduction of sample observation the remained optimal result will be taken at lag 0.

Estimating the VAR model

The VAR model was used in estimating the seemingly of the results (SARE) at 0.05 level of significance and 95% of confidence interval with the estimation of the model fit and parameter estimation.

Table 4: Showing the model fit summary n=28

Equation	Parms	RMSE	R-sq	F	p>F
lnFDI	5	.414195	0.8843	43.93428	0.0000
lnUER	5	.082795	0.7943	22.1984	0.0000

The results from Table 4 above shows that, both lnFDI and lnEUR had the best fit results with coefficient of determination of above 79% which is good for estimating the model, further the obtained model fit shows that there is the lowest root mean square error of less than 0.5.

Table 5 showing parameter estimation of the VAR model

	Coeff	Std. Err	Z	P>Z	[95% Conf. Interval]	
lnFDI						
lnFDI						
L1.	0.621	0.133	4.660	0.000***	0.345	0.897
L2.	0.117	0.069	1.680		0.106	-0.027
lnUER						
L1.	-0.529	0.977	-0.540	0.594	-2.550	1.492
L2.	0.821	0.987	0.830	0.414	-1.221	2.864
_cons	-0.342	0.621	-0.550	0.587	-1.627	0.943
lnUER						
lnFDI						
L1.	-0.030	0.027	-1.120	0.275	-0.085	0.025

L2.	0.004	0.014	0.280	0.783	-0.025	0.032
lnUER						
L1.	1.088	0.195	5.570	0.000***	0.684	1.492
L2.	-0.408	0.197	-2.070	0.050**	-0.816	0.000
_cons	0.317	0.124	2.550	0.018**	0.060	0.574

The model results from Table 5 shows that at 0.05 level of significance lnFDI is associated positively with observation of lag 1 with positive unit coefficient of an average increase of 0.621 unit on every observation at lag 1. Further, results on the other hand shows that lnUER had a significant average decrease in observation at lag 2 with 1.08 units increasing at lag 1 with unit 0.408.

Further results shows that there is no statistically significant change on lags on each independent variable lnFDI and lnEUR when associated to one another.

Granger Causality- Wald Test

In assessing causality of the model on Table 5, hypothesis guiding it was used as stated below,
Null Hypothesis guiding the test:

Ho: Lagged values of lnFDI do not cause lnUER

Ho: Lagged values of lnEUR do not cause lnFDI

Table 6: Showing the VAR test for causality among lnFDI and lnEUR (n=28)

Equation	Excluded	F	df	df_r	Prob>F
lnFDI	lnUER	0.372	2	23	0.693
lnFDI	ALL	0.372	2	23	0.693
lnUER	lnFDI	1.302	2	23	0.291
lnUER	ALL	1.302	2	23	0.291

Results in Table 6 shows that, there is no causal relationship between $\ln EUR$ and $\ln FDI$ as all the $p > 0.05$ hence no statistical evidence to justify it at 0.05 level of significance. This means that, $\ln EUR$ has no causal relation to $\ln FDI$ and vice versa.

Conclusion

The paper establishes the influence of the long run relationship and short run relations between FDI and Unemployment rate in Tanzania. The study began by first proving that the variables under study were all stationary at first difference. The study used Granger causality to establish and obtained the long run and causal influence between FDI and Unemployment rate in Tanzania. The study reveals that there is no causal effect relationship between the variables. Hence, FDI has no causal influence on Unemployment rate whilst Unemployment rate has no causal influence to FDI as well. The results mean that FDI negatively related to the unemployment, this signifies that the higher the inflows of FDI the more employment created, conversely unemployment rate has no causal impact on FDI.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this manuscript.

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Appendix: FDI and Unemployment rate in Tanzania 1991-2020

Year	FDI Inflows (Bil)	Unemployment Rate (%)
1991	0.00001	3.6
1992	0.01217	3.561
1993	0.02046	3.497
1994	0.05	3.436
1995	0.11994	3.358
1996	0.15007	3.291
1997	0.15789	3.245
1998	0.17231	3.186
1999	0.5167	3.117
2000	0.4634	3.063
2001	0.54927	2.99
2002	0.39557	3.04
2003	0.3184	3.106
2004	0.44254	3.162

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HELD ON 15TH -16TH NOVEMBER, 2022 IN DODOMA, TANZANIA

2005	0.93552	3.226
2006	0.40304	3.3
2007	0.58151	3.03
2008	1.38326	2.769
2009	0.95263	2.5
2010	1.8132	2.986
2011	1.22936	3.47
2012	1.79965	3.228
2013	2.08726	2.93
2014	1.41609	2.12
2015	1.50602	2.143
2016	0.86404	2.158
2017	0.9377	2.177
2018	0.97158	2.206
2019	1.21724	2.222
2020	0.68489	2.528

Effect of Procurement Process Management on Organizational Performance in Dodoma City

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Abstract

The main purpose of the study was to procurement process management on organization performance, the study adopted a descriptive survey design. The study used simple randomly, sampling to select 67 employees. Primary data were collected using questionnaires and interview method. Data were analyzed using regression analysis. The study findings revealed that, procurement planning, procurement methods, procedures and subcontracting strategies were positive and significant related to organization performance. The study concludes that, procurement planning, procurement methods, procedures and subcontracting strategies were important component of procurement process that affect organizational performance in Dodoma city. The study recommends that the management should ensure that there is an appropriate focus on good practice in procurement and that there is a significant procurement procedure in place to ensure compliance with all relevant guidelines. On delivering services management must address the issue of procurement practice as this has accrued benefits directly to the bottom line of the organization.

Key words: Procurement process management, organization, performance, Dodoma city council

Introduction

Procurement practices are key functions in the public sector as well as in private sector, since procurement process is generally a critical part of open spending in organizations (Mena, Van and Christopher, 2018). According to Islam *et al.*, (2017) states that procurement practices comprise of the actions taken by the purchasing organization to navigate and integrate its performance in order to increase productivity by reducing cost and time. Procurement is the practice of selecting suppliers, strategic vetting, setting up payment terms, selection, and negotiation of contracts and actual purchasing of goods.

Worldwide, public procurement has become an issue of concern and debate, and has been subjected to reforms, restructuring, rules and regulations (Kabega, Kule & Mbera, 2016). The linkage of procurement to organizational performance in particular, makes the embracing of best practices important to present organizational success (Hussein & Shale, 2014).

In Africa, public sectors have been struggling with poverty and provision of effective services. Developing countries like Tanzania, the procurement function is said to have evolved from a clerical and non-strategic role to more strategic function that dominates boardrooms that is capable influencing long term strategic decision (Knight et al, 2007). For a procurement function to effectively impact strategic direction of the organization, there has been a need to pay significant attention from one planning cycle to another (Gian, 2012). Efficiency and competitiveness of services provided by the organization are among the benefits that can be realized through procurement and therefore it is necessary to look at the factors affecting the procurement practices in the Public Procurement Entities. The factors may include staff competence, resources allocation and supplier development. Andrew (2008) noted that in the recent decade, procurement practice has a key subject of the debate amongst practitioners, academicians and researchers due to poor levels of performance. In additional to that, Juma (2012) explore that poor procurement practice in the Public Procurement Entities has been a problem due to non-compliance of procurement regulations, lack of adherence to procurement procedures, lack of professionalism in undertaking procurement activities, lack of transparency and integrity in tendering processes. Banda (2009) observed that factors affecting procurement practices in developed and developing countries are different. In East Africa both public and private sectors are struggling with setting up the operational framework of procurement processes while developed countries as United States and European Countries are struggling on how to make the operational framework of procurement processes efficient.

In Tanzania each Public entity (PE) required to perform Procurement tasks and is held accountable for all Procurement decisions under Public Procurement Act (PPA) Cap 410, the law that governs public procurement in the country. The Act also specifies the purposes and mandates of any operational or regulatory organizations that may be established. It lays out guidelines for Public Procurement and includes procedures, methodologies, and punishments for illegal behavior. In addition, a framework for resolving complaints and regulations over Public Procurement is outlined (Mahuwi & Panga, 2020)

All Public Entities are strongly encouraged by the Public Procurement Act to follow the Public Procurement Acts ethical code of conduct, regulations, and attitude of ethical practices, and to discourage and avoid malpractices in public procurement activities. Malpractices include things like lying, cheating, stealing, misusing money, or stealing someone else's job. Accordingly, the Act promotes the principle that all parties be treated equally, impartially, and honestly (Israel et al., 2019).

Whether it is the market, the legal environment, the political environment, the organizational environment, the socio-economic environment, or any number of other variables, public procurement professionals have always faced obstacles. To a large extent, public procurement professionals' efforts to increase competition are governed by prevailing market conditions. In addition, the market decides whether or not the socioeconomic goals of procurement are met, whether or not a government agency can meet its needs, how quickly those needs can be met, and the quality and price of the commodities, services, and capital assets that are acquired. Market conditions are very beneficial in industrialized countries but may be negative in developing countries due to the varying rates of economic growth around the globe. Some goods and services are exclusively needed by the government (especially for weapons systems), but they are nevertheless on the market even in a highly competitive economy like the United States. Considering its small size and lack of alternatives, this market is essentially captive (Mahuwi & Panga, 2020)

Public procurement professionals also face an increasing amount of difficulty as the world's marketplaces continue to globalize as a result of regional and international trade agreements and treaties. In addition to the above-mentioned challenges of adhering to their respective governments' procurement laws and policies and international trade requirements, they must also contend with issues such as translation, payment, lead time, transportation, foreign government regulations, trade agreements, and currency fluctuations. As a result, "before commencing on a foreign purchasing program, public procurement practitioners must carefully examine the total cost implications and compare them to local expenses (MolleL2015).

Statement of the Problem

Supplier selection procedure has become a crucial function for any Public Procurement, seeking to identify, evaluate and contract competent Suppliers. This is because Organizations

are increasingly focusing on the core competencies and outsourcing the non-core activities in order to gain competitive advantage.

However, it is in public domain on the runaway expenditure by Public Procurement in sourcing for goods, works or services. This is more often leads to delivery of substandard goods, works and services, incomplete orders, termination of procurement processes and contracts which according to Public Procurement and Regulatory Authority are Supplier related.

Further, it is argued that poor supplier selection procedure can cost a firm millions of losses and inexplicable damages on reputation and future sales. According to the Public Procurement and asset disposal (2015) procuring entities should consider qualifications, experience, capability, resources and equipment as Supplier selection criteria.

Moreover, Kipkemoi (2017) in his study found that, there is a strong relationship between the experience, knowledge, skills and attitude of procurement staff and its performance in public procurement. More experienced organizations are more likely to have better performance in terms of cost, quality, and speed of contract award. However, there is no guaranteed correlation between experience and performance in public procurement.

Grandia & Voncken (2019) argue that. The efficiency of the supply base has a direct impact on procurement performance. Inefficient supply base can lead to high procurement costs, while efficient supply base can help procurement save money. Thus, improving the efficiency of the supply base is an important step in improving procurement performance.

Based on the highlighted factors this article therefore aims to bring out procurement process management best practices and some of the benefits associated with the practices in the context of public procurement. It seeks to relate procurement process management and overall organizational performance of public procurement in Dodoma City Council. It will address questions on what is the effect of procurement process management on organizational performance in Tanzania with a focus on Dodoma City Council.

Literature Review

Effective and efficient procurement practice is the nerve center in every public or private organization and this requires a tight system to be followed and adopted (Mwaipopo, 2017). When procurement practices in Public Procuring Entities (PPE's) is inefficient it affects the

other entire departments and therefore has great impact on organization. The enactment of the PPA 2011, regulation 2013 and its Amendment 2016 in Tanzania have reforms that were meant to promote efficient, effectiveness, professionalism, accountability and value for money in public procurement (PPRA, 2016). Furthermore, there was established an authority known as the Public Procurement Regulatory Authority (PPRA). The Authority has all the powers necessary or convenient to ensure the enactment of procurement functions in Public Procuring Entities (PPE's) (Chebet et al, 2016).

Despite all the efforts made by the government of Tanzania PPRA to improve the procurement practices in PPE's in the country, many local studies and audit reports (Ivambi 2016; Marunda (2016; Naftal 2018) show that procurement practice is still weak by substandard work, poor quality goods and services (Kibona, 2017). There are several weaknesses which affect procurement practices in PPEs' and these weaknesses are still revealed to date in public entities.

Onyango (2014) found that, effective procurement planning can help to improve overall efficiency and effectiveness within an organization,. Ultimately, it is likely that the procurement planning on organizational performance will depend on a number of factors, including the specific procurement requirements and processes involved, the organizational structure and management style, as well as the specific business objectives pursued by the organization

The study by Mokogi *et al.*, (2015) found that, subcontracting can lead to increased efficiency and cost-effectiveness in procurement, as well as better coordination between different departments within a company. Additionally, subcontracting can help to ensure that the final product meets customer requirements, as well as ensuring that all subcontractors are qualified and reputable

Several global and local studies on procurement management practices and their impact on organizational performance have been conducted. Ricarda (2016) conducted an international survey on the impact of electronic procurement practices in Geneva. His goal is to investigate the effects of procurement practices on the global electronics supply chain.

Aleman and Guererro (2016) conducted research on procurement practices in global supply chains in Switzerland. Their main goal was to figure out which themes used procurement

practices. Based on their research, they concluded that most procurement practices revolve around providing fair prices.

Caritas, Julius, and Zenon (2016) looked into how procurement practices affected the performance of a Rwandan government construction project. The primary goal of the study was to look into the impact of procurement practices on the performance of public procurement management in Rwanda.

Karanja and Kiarie (2015) investigated the impact of procurement practices on organizational performance in the private sector at Guaranty Trust Bank. Their goal was to show how procurement practices affect the performance of a Kenyan private sector organization.

Similarly, the PPRA 2019/2020 report shows that public entities, includes Dodoma City Council, continue to exhibit the same weakness in their procurement practices that have been previously identified. These weaknesses include, but are not limited to, a lack of adherence to proper procurement procedures and regulations, as well as the use of inappropriate metrics to gauge the efficacy and efficiency of public procurement. Poor procurement methods, as stated by Lyimo & Mrema (2022), contributed to the decline in public procurement's profitability. Delivery delays, increased faults, delivery of low-quality items, or non-delivery altogether are all results of poor procurement methods, which are a major barrier to the expansion of public procurement. This study aimed to evaluate the effects on procurement processes in organization process, notably in Dodoma City Council, with the ultimate goal of promoting the use of the most efficient and effective methods possible.

Methodology

This study employs a cross-sectional research design because it allows multiple variables to be investigated at the same time and aids in the establishment of the relationship between procurement practices and their impact on organizational performance. This study's population consists of 80 Dodoma City Council employees. The sampling procedure refers to the technique or method used by the researcher to select items for the sample. There are two types of sampling designs: probability sampling and non-probability sampling (Kothari, 2006). A researcher used simple randomly sampling and purposive sampling techniques in this study. The simple random sampling technique was used to select employees involved in public procurement, with the criteria that these employees have an equal chance of being

selected. To select employees who will fill out questionnaires, lottery methods were used in simple random sampling.

The purposeful sampling technique was used to select heads of departments and units for interviews. This technique was used in this study because the heads of departments and units are experienced, knowledgeable, and key decision makers in public procurement.

The researcher selected a sample of 67 employees from a targeted population that are employees in Dodoma City Council who work under six sectors that is Works, PMU, Finance &Accounts, Health, Education and Planning and Economics.

Table 49: Sample Size Composition

Category of Respondent	Population	Number of respondents	% of respondent
Works	13	11	16.4
PMU	10	10	14.9
Finance & Accounts	10	13	19.4
Health	20	13	19.4
Education	17	15	22.4
Planning &Economics	10	5	7.5
Total	80	67	100%

Data analysis technique

Data analysis involves reducing accumulated data to a manageable size by developing summaries, looking for patterns and applying statistical techniques (Kothari, 2004). In this study data was checked for incomplete questionnaires as a preliminary analysis. Completed questionnaires was coded and keyed into SPSS 2021 software version to aid the analysis. Quantitative data was analyzed using multiple regression statistical method.

The multiple regression model is presented by the following questions:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon \dots\dots\dots 1$$

Whereby:

Y=Organizational performance

x₁=Procurement Planning

x₂=Procurement methods and procedures

x₃= Subcontracting strategies

Qualitative findings was used to analyze data from structured interview method using contents analysis during content analysis data that was recorded from note book and records was transformed into themes to give meaningful results.

Results and Discussion

Inferential Statistics

Table 2 shows that, the Adjusted R-Squared value is 0.49, which gives confidence as it means that the model explains 49% of the procurement process in the overall organization performance. So it suggests that there is indeed a positive relationship between them.

The findings also show the F-value is 20.1 and significant at P-value < 0.000. This indicates that the independent variables (Procurement planning, procurement methods, procedures and subcontracting strategies) predict the dependent variable (organization performance).

Table 2: Effect of procurement process management on organizational performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.034	0.097		0.347	0.730
Procurement Planning	0.284	0.137	0.260	2.079	0.042
Procurement methods and procedures	0.323	0.127	0.308	2.550	0.013
Subcontracting strategies	0.251	0.143	0.241	1.753	0.034

Dependent Variable: Organization Performance

R-Square = 0.49

F-value = 20.1

Findings in Table 2 found that, procurement planning was positive and significant related to organization performance ($\beta = 0.284$, p-value < 0.005). This implies that any positive change in procurement planning will increase organization performance by 28.4%. During interview with third key informants add that:

“...Procurement planning is important because it allows an organization to identify potential suppliers, understand the market, and assess the risks involved in working with a particular supplier...”

The findings supported by Onyango (2014) found that, effective procurement planning can help to improve overall efficiency and effectiveness within an organization,. Ultimately, it is likely that the procurement planning on organizational performance will depend on a number of factors, including the specific procurement requirements and processes involved, the organizational structure and management style, as well as the specific business objectives pursued by the organization

Findings in Table 2 found that, procurement methods and procedures was positive and significant related to organization performance ($\beta = 0.323$, p-value < 0.005). This implies that any positive change in procurement methods and procedures will increase organization performance by 32.3%. The findings not concur with those of Leiyang (2016) found that, the effect of procurement methods and procedures on procurement performance can vary depending on a number of factors, such as the type of procurement, the organization's size, and the specific procurement requirements. However, some general points that may be relevant include. Thus, the use of a variety of procurement methods can help to ensure that the best possible value for money is achieved, while ensuring that the required goods and services are available in a timely manner.

Findings in Table 2 found that, subcontracting strategies was positive and significant related to organization performance ($\beta = 0.251$, p-value < 0.005). This implies that any positive change in subcontracting strategies will increase organization performance by 25.1%. The findings supported by Mokogi et al., (2015) found that, subcontracting can lead to increased efficiency and cost-effectiveness in procurement, as well as better coordination between different departments within a company. Additionally, subcontracting can help to ensure that the final product meets customer requirements, as well as ensuring that all subcontractors are qualified and reputable.

Conclusions and Recommendation

The study found that, procurement planning, procurement methods, procedures and subcontracting strategies were positive and significant related to organization performance. The study concludes that, procurement process management is procurement practices that affect organizational performance in public procurement. The study recommends that the

management should ensure that there is an appropriate focus on good practice in procurement and that there is a significant procurement procedure in place to ensure compliance with all relevant guidelines. On delivering services management must address the issue of procurement practice as this has accrued benefits directly to the bottom line of the organization.

This study provides several important policy implications; the fact that organization factors such as budget allocation is critical task in supplier performance, the government and all key institutional stakeholders should in a relative way respond to the transformations of the policies and rules that are governing the supplier selection process on procurement process specifically in budget allocation. This will enhance organization performance. Similar study should be undertaken to other LGA's in Tanzania, because this study covers only Dodoma City Council for findings generalization. Moreover, another study should be carried out to find out the other component of procurement process, that influences organization performance.

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The Efficacy of The Organizational Specifications Preparation Process. A Case of The Ministry of Finance and Planning

Zainab Mansour Suha and Frederick A. Mwakibinga

Abstract

The aim of the study was to examine the efficacy of organizational specifications' preparation processes in public organizations with the Ministry of Finance and Planning as a case. As sample of 52 respondents was involved. The findings revealed that well established specification process facilitates efficiency, economy and effectiveness in achieving desired procurement outcomes. The study finally made several recommendations for the attention of bureaucrats.

Key words; Efficacy, Specification, Procurement.

Introduction

In public organizations procurement process calls for correct specifications for products and services to be ordered and delivered. One of the most crucial aspects of the procurement process is the specification. The hardest function is writing good specifications (Otter, 2010). Procuring goods and services of the right quality must have proper specifications, which can lead to a reduction in operating costs and other inconveniences for institutions. Good specifications allow a company to make reasonable purchases and be better able to meet its goals. Since it is claimed that poorly drafted specifications and unplanned procurement processes lead to higher costs for the government, such costs arise from delays in project completion, late delivery of goods or services, and poor project execution (Shirima, 2009).

Public organizations strive to improve the procurement process' efficiency and effectiveness, achieving the goal of value for money, which also involves, among other things, quality assurance. In this case specification development is an important input to the procurement exercise. As a specification, it describes the requirements; it is the basis of all offers and therefore an important part of the conclusion of a procurement contract. To ensure that the chosen supplier provides what is requested, a specification becomes a crucial contract management document (Nancy, 2019).

Issues related to project delivery, contract changes, and poor customer service is among the cases commonly associated with the incorrect specification of requirements, United Nations

(2017), Specification becomes the core around which the eventual contract is written and later managed. The specification affects the entire procurement cycle. The effectiveness of the procurement process is greatly influenced by the quality of the specification, which gives suppliers, service providers and contractors with important information about what the procurement entity intends to purchase. On the other hand, bad or incomplete specifications may cause inconveniences to the organization.

Many of the previous studies on the contribution of procurement specification concentrated on the process with little emphasis on deliverance of quality procurement outcomes. The study seeks to close this apparent knowledge and geographic discrepancy. Against this background, this study aimed at examining the efficacy of the organizational specifications preparation process.

The structures of the study are in six main parts. Part one describe abstract, part two takes into account introduction of the study, part three basically looks at literature review on the efficacy of organizational procurement' specification, part four put together methodologies used in the study. Part five is the analysis, findings and discussions and lastly, conclusion and recommendations for the study based on the findings got from the analysis of field data.

Literature Review

A firm must be able to understand the effectiveness of clear specifications because it establishes an important base for satisfactory performance of the organization. In the same way, organizations strive to realize the value for money spent in procuring intended inputs. In order for the organization to be able to meet the motive behind of public procurement which is to deliver goods and services in cost efficient manner and to provide equal and opportunity to participate, the issue of specification in procurement should be given a great weight in the whole process of material and service acquisition.

To understand the specification preparation process, one must understand fundamental value of specification in implement the purchasing strategies developed by a company. According to Chikira (2007) specification is the basis of all offers, and therefore the foundation for a contract. When the contract is in place, the specification becomes an essential contract management document which is used to ensure that the chosen supplier provides what is specified. It must therefore be clear and complete, and accurately define what is expected

from a supplier: the outputs (for services) or the functional and performance requirements (for goods).

The primary significance of specifications stems from the fact that they aim to reduce the procuring entity's operating costs. The cost of materials alone clearly demonstrates the importance of ensuring that material acquisitions adhere to the entire description or provided specifications (Pysdek, 2003). This means that the costs of many materials firms are engineered into the specifications of the product during the design stage.

Ellram et al. (2004) and Lindberg and Nordin (2008) in their studies revealed that the viewpoint might prevent the client from receiving the most suitable service because the supplier perspective is not taken into account in the decision-making process. It is suggested that the early specification of requirements enables buyers to take prudent decisions, protecting them from opportunistic vendor behavior.

Several approaches describe product and services development as well as structured, serial movement, starting with a requirement specification. Hence creating a specification is a vital and must be central issue in procurement (Munyimi and Chari, 2018). Furthermore this theoretical literature provides some guidelines for the preparation of a good specification, for instance procurement requirement should be unambiguous, solution-independent formulation, clearly linked to internal user and customer needs, measurable(quantitative or qualitative).

The approach was relevant in examining the efficacy of the organizational specifications preparation process since it has more concern in the different stages of the procurement process.

Conceptual framework.

Given how crucial the specification is to the procurement process, procuring organizations must be extra cautious before providing any information to the supplier, this information includes price quotation forms, purchase orders, advertising tenders, or before signing any agreements with suppliers. In order to source and acquire the proper quality of goods and services for the firm, the procurement department must make sure that the specifications are accurately clarified. Without accurate specifications, procurement cannot be completed smoothly. As a result, user departments must make sure that whenever an order is placed,

they must provide accurate and clear specifications and be able to communicate them effectively to suppliers, allowing the organization to later acquire its needs.

Efficacy of the organizational specifications preparation process

A firm must be able to understand the effectiveness of clear specifications because it establishes an important base for satisfactory performance of the organization. In the same way, organizations strive to realize the value for money spent in procuring intended inputs.

The above description shows the cause effect solution between Efficacy of the organizational specifications' preparation process and desired acquisition outcomes.

Methodology

The researcher adopted cross-section research design. Consequently, because the design enables the researcher to describe what is happening at present. The researcher was able to examine many participant characteristics at once (age, income, gender), as a result of the participants being chosen based on specific factors of interest, due to the use of various data gathering techniques like a questionnaire. The unit analysis in this study were employees of the Ministry of Finance and Planning at Zanzibar particularly the procurement department, stores department, distribution department, demand and planning department, clearing and forwarding, quality assurance department and finance department who are in one way or another related direct or indirect with procurement process. Targeted population of this study was 52 employees of Ministry of Finance and Planning. However, the researcher was interested in selecting a sample that represented the actual population, so researcher chooses non-probability sampling because of the emphasis on deep information rather than inferences or generalizations. Data were analyzed after determining well-being by classifying them based on population characteristics and summarizing them using the Advanced Statistical Package for Social Science (SPSS) version 20 and measuring them in terms of a quantitative approach (Kombo, 2016). Furthermore, coding of information for quantitative data, as the data was computed through descriptive statistics in order to understand the contribution of procurement specification on deliverance of quality procurement outcomes. Qualitative data were analyzed thematically by incorporating ideas with shared characteristics under one theme. Descriptive analysis was used to measure the frequency and central tendency of data as far as examining the efficacy of the organizational specifications preparation process was

concerned. The descriptive analysis makes it easier for the analyst to act on information. Regression analysis is a statistical method that makes it possible to examine the relationship between two or more variables of interest.

Analysis, Finding and Discussion.

Specifications in facilitating efficiency, economy and effectiveness

According to the data in table 1, 75% of respondents agreed that specifications have facilitated efficiency, economy, and effectiveness in achieving desired outcomes in public procurement, 21.2% disagreed, and 3.8% were neutral. As a result, the specification can play an important role in ensuring the acquisition of standard purchasing items. Furthermore, each of them can be checked to ensure that they meet the quality and acceptability criteria specified in the product or service description.

Table 50: Specifications in facilitating efficiency, economy and effectiveness

	Frequency	Percent
Disagree	11	21.2
Neutral	2	3.8
Agree	38	73.1
Strongly Agree	1	1.9
Total	52	100.0

Source: Field data 2022

Negative impact in specifications preparation

Table 2, reveals that 67.35% of the respondents agreed that they have experienced a negative impact due to failure in abiding by rules and procedures when preparing specifications, 23.1% of the respondents disagreed and only 9.6% of the respondents were neutral. This result implies that staff knows the consequences of failing to abide by rules and procedures when preparing specifications which repeated problems may lead to long-term issues that seriously affect the company. These include loss of money and profitability, a bad reputation and negative publicity. As Lysons & Farrington, (2017) pointed out the obvious result of poor preparation of specifications is loss of money as having poor procurement strategies means making redundant purchases.

Table 51: Negative impact in specifications preparation

	Frequency	Percent
Strongly Disagree	3	5.8
Disagree	9	17.3
Neutral	5	9.6
Agree	31	59.6
Strongly Agree	4	7.7
Total	52	100.0

Source: Field data 2022

Conduction of inspection before receiving goods from the supplier

To determine if the inspection is conducted before receiving goods from the supplier based on the procurement specification, the data revealed that 61.5% of the respondents have said yes, 34.6% of the respondents have said no and only 3.8% of respondents are neutral, as presented in table 3. The findings imply that it is crucial to check and inspect the shipment to ensure that the right quantity and quality of ordered goods were received from a provider. As Bakhesha (2014) pointed out it is important to make sure that the material meets quality specifications and that no defects in quality exist during the inspection. The findings also incur with Mburu (2014), who noted inspections can be costly and time-consuming. If the inspection quality is poor, the consequences can be costly; in addition to the need for re-inspection, if a product fails to meet specifications or customer expectations, it may result in product recalls, rework, litigation, and reimbursement. This emphasizes the significance of inspection.

Table 52: Conduction of inspection before receiving goods from the supplier

	Frequency	Percent	Cumulative Percent
Yes	32	61.5	61.5
Maybe	2	3.8	65.4
No	18	34.6	100.0

Total	52	100.0

Source: Field data 2022

Conclusions And Recommendations

Conclusion

Basing on the study findings, it can be concluded that; specifications facilitated efficiency, economy, and effectiveness in achieving desired outcomes at Zanzibar's ministry of finance and planning, despite the negative impact experienced due to failure in abiding by rules and procedures when preparing specifications.

Recommendations

However, it was clear from the analysis of the research that the ministry of finance and planning might take into account a number of initiatives.

The study also revealed the suppliers have no ability to provide what are they required and are supposed to provide, this will lead to poor management of time, and also causes unnecessary cost, the study recommends the ministry to have a proper and qualified supplier in order to get smooth requirement as instructed. This is due to the fact that at some point suppliers do their job basing on experience and not by their professionalism.

Also organization must insist on conducting the inspection after receiving goods from supplier in order to avoid cost. When internal knowledge is not enough Ministry must ensure education about specification preparation must provided so as to increase performance in organization.

Limitations

The researcher faced a problem of accessing the data due to confidentiality of the organization. Furthermore, respondents could not be available all the time as planned due to busy with economic and other social activities. The researcher therefore was ought to reschedule meeting time with respondents in order to fulfill the demand.

Areas for further study.

The study involved only staff at the Ministry as a sample was used, thus the results can only be generalized to the ministry industry but not in other sectors and supplying companies, and thus a similar study can be conducted by considering other populations and another ministry.

Specifically, Zanzibar's ministry was the subject of the study. For the goal of making generalizations, in-depth study on the same subject needs to be carried out in several distinct cities, towns, or regions

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Factors Affecting the Performance of Procurement Process in Cooperative Union in Tabora: Case of Selected Cooperative Unions in Tabora

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Abstract

The study examined the factors affecting the performance of procurement process in the cooperative unions in Tabora Region, Tanzania. The study dwells purposive sampling has been deployed in the research. The study has covered population sample of one hundreds sample size, among them it is about eighty respondents from the 50 cooperative union's managers, 10 suppliers and 40 board members in Tabora, Tanzania who enhanced the study to come up with the results. Also study focused on the methodology. These methodologies included the study's area, design, population, and sample techniques, as well as the instrument and method used for data collecting. As a result of the volume of work that has to be done and resources to be utilized, there is the need to adopt best practices and strategies to ensure efficiency and quality delivery of service. In conclusion, the study suggested that procurement strategy was a critical factor that positively affects performance of procurement processes in cooperative Union in Tanzania. The study recommends that cooperative sub sector must strive to improve on its administrative role of monitoring the various cooperative societies to ensure proper Procurement Strategies and Contract Management Practices are always adhered to, so that there will be value for money in cooperative union Procurement Process.

Key words: Procurement, Contract, Cooperatives & Performance.

Introduction

Procurement is a powerful driver of development of a nation. In contemporary times, it has been seen as value adding and solution providing business function which aids organizations as a means of profitability, corporate growth and competitive advantage (Kirai and Kwasira, 2016). It is the process of acquisition by means of contractual arrangements after the public competition of goods and services, works and other supplies by the public entity (Mokogi *et al.*, 2015).

In developing countries, the current attention of government in collaboration with institutions is achieving sustainable development goals particularly poverty reduction through improvement of agriculture sectors. Hence, all these can be achieved through effective public procurement process (Ngatara and Carolyne, 2016). Effective procurement process should be efficient, transparent and accountable to achieve its objective (Cosmas-Gonzalves, 2017). Recent studies in public procurement revealed that public procurement process leads efficient management of public money which is obtained from tax payers. This totally enhances the overall public sector effectiveness (Ngatara and Carolyne, 2016). African countries spent 70% of their annual budget for procurement of goods, services and works for institutional uses (Ambaw, 2017).

Similarly, the government of Tanzania has realized the importance of public procurement in agriculture sector including improve procurement of goods in service to farmers through co-operatives union to enhance the economic development of the country due to agriculture sector contribution to poverty reduction (Mwandobo, 2013). Therefore, co-operatives union has been part and parcel of development growth in Tanzania for many years. The rise of free markets, made co-operatives struggle to compete with the private sector and many has not been able to provide their members with services they need. The Government has responded to this problem by introducing a new Cooperative Development Policy (2002) to help cooperatives to regain their importance in the economic lives of the people (Ainebyona and Tiruhungwa, 2012).

Given the importance of cooperative union and procurement process it is vital to assess the factors affecting the performance of procurement process in cooperative unions since the findings shows that the effectiveness of the procurement process and performance to most of

the public entities including cooperative unions below 50%; most of the agriculture projects do not have adequate provision for quality, time, and scope (Mrope, 2018). Most of the projects lack records contrary to Public Procurement Act No. 7 and its Regulation of 2013 as amended in 2016, which states that contract documents, must be kept for not less than five years (URT, 2019). Therefore, this study will investigate factors affecting performance of procurement process in cooperative unions in Tabora region.

However, the attendance of poor implementation of procurement process leads to poor financial performance of cooperative unions, which in some cases leads to total collapse, and this could be attributed to procurement management practices not putting in place (URT, 2019). For instance, Co-operative Audit and Supervision Corporation report of 2021 revealed that several cases involve loss of millions of shillings, resulting in a drop in profits and dividends, delayed disbursement of sales to members, and non-compliance with budgets in expenditures and revenue projections were occurred in cooperative union in Tanzania due to improper procurement process, absence of appropriate procurement plan, failure to use appropriate standard documents, and the incompetence in the execution of procurement process (Audit and Supervision Corporation report, 2021).

Despite The government put several efforts to improve procurement process and performance in cooperative unions includes the Act No.6 of 2013 which established Tanzania Cooperative Development Commission (TCDC) mandated to regulating and promote cooperatives, Act No. 15 of 1982 of Co-operative Audit and Supervision Corporation (COASCO) for Auditing and providing supervision and other consultancy services to Co-operatives in Tanzania. Yet the AMCOS members not receive goods and service from Cooperative Unions within timeframe (Audit and Supervision Corporation, report, 2021).

Most previous studies focused on the factors influence of procurement performance in the public sector (Kawina, 2019; Mutai & Okello, 2016; Mwasikili, 2020). However, little have been carried out procurement process in cooperative Unions. Therefore, this study will investigate factors affecting performance of procurement process in Cooperative Unions in Tabora region.

Literature Review

Theoretical Literature Review

The study was guided by Agency theory and record management theory. The agency theory – from either classical or neoclassical perspectives– provides contributions to procurement activities in various sectors (Philip, 2015). Agency theory has been applied to various activities associated with procurement including, outsourcing and supply chain collaboration. The important assumptions underlying agency theory are that the potential goal conflicts exist between principal and agent, each party acts in its own self-interest, information asymmetry frequently exists between principles and agents, agents are more risk-averse than the principle and efficiency is the effectiveness criterion.

In procurement, the top management herein assumed to be the principal contracts the procurement process to the procuring entity referred to as the agent to carry out the operation. The control of the process is the most critical part of this study; hence the agency theory forms one of the best theories to analyze the whole concept of procurement in the public sector (Philip, 2015). In chapter one section 1.2 of the study background, we saw Tanzania has regulatory framework (Public Procurement Act No. 7 and its Regulation as amended in 2016) that are in charge of managing and regulating the whole procurement process (Kaula, 2018). In this kind of arrangement, the process has been separated from the government to the committee. If keenly followed, the process was initially within the realms of tendering committees before the same being done away with the relationship here between the agent and the principal form the basis of this study. In this study this theory relates to influence of contract management practice on performance of procurement process.

Though, Michael Buckland developed the record management theory in 1994. The theory perceived record management in professional and intellectual eyes as it plays a more significant role in the achievements of organizational goals. Buckland added that records management is a source of organization performance. Procurement records and documentation may serve organizational performance when all procurement processes are recorded and kept. The Public Procurement Act of 2011 provided that records may be generated as part of the procurement process, and it emphasizes maintenance of procurement records for not less than five years.

According to the Public Procurement Act of 2011 and its regulation of 2013 as amended in 2016 S. 61 requires all procuring entities to maintain records for its procurement proceedings in which it is involved, including decisions are taken. The reasons for it and such records

shall be kept for not less than five years from the date of completion of the contract and be made available when required to the Minister and the Controller Audit. Thus, the theory will be appropriate for explaining the influence of records keeping management on performance of procurement process

Empirical Review

Contract management practice on performance of procurement process

Blankson (2019) emphasizes that many African countries public procurement entities are facing challenges in executing procurement contracts and the delivery of the required services due to the way procurement processes are performed by procurement personnel. Moffat and Mwangangi (2019) argued that ineffective contract management, poor contract management records, unfinished projects, poor service, and product delivery are a significant problem facing public sectors,

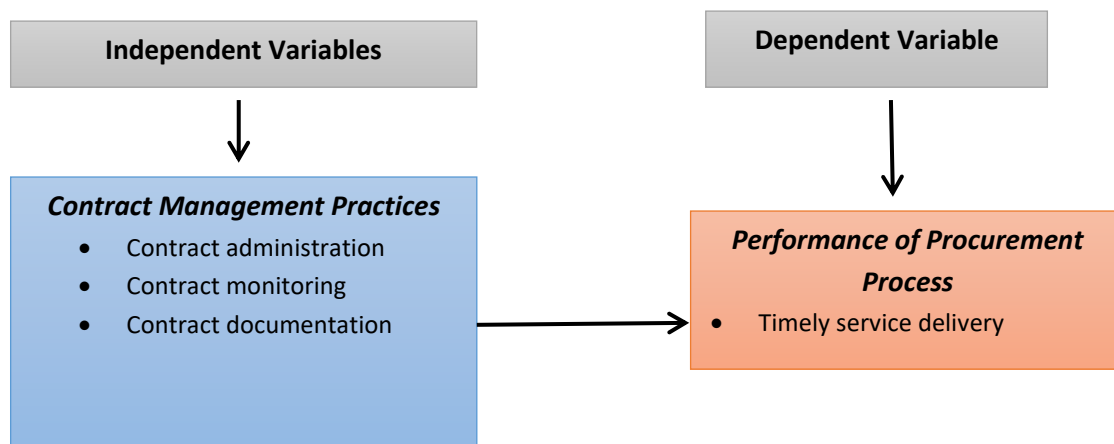
The study done by Mushi (2018) effects of procurement functions such as need assessment, supplier sourcing, contract management and inventory management on project performance in Mbeya Region found that Non-Governmental Organizations in Mbeya region, majority of the respondents indicated that need assessment, supplier sourcing, contract management and inventory management affected project performance to a large extent. Regression analysis results also indicated that need assessment, supplier sourcing, contract management, and inventory management all have an effect on project performance.

However, empirical studies related to procurement have shown the importance of procurement practices in the public entities however, none of them explored aspects of procurement processes in regards to the public organization specifically in cooperative unions because poor performance has been observed frequently. Hence, this provides an opportunity for undertaking this research, which aims to fill the knowledge gaps which left by other scholars in regards to the procurement processes in the cooperative union in Tanzania by assessing the factors affecting performance of procurement process in cooperative unions in Tabora region.

Conceptual Framework

Fisher & Buglear (2010). defines a conceptual framework as a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation. It is formed of patterns of concepts and their interconnections.

In this study conceptual framework (Figure 1) show the relationship between independent and depend variable of the study. Independent variable explained by factors affecting procurement process such factors includes contract management practice, records keeping management and Information technology application. Dependent variable presented by performance of procurement process measured by timely service delivery.



Source: Researcher constructions

Figure 1: Conceptual Framework

Research methodology

Area of the study

This study was conducted at Tabora Region, Tanzania due to the fact that Cooperative Unions which are MILAMBO and WETCU in Tabora have bulk procurement of Inputs and others services because of the nature of their products which is Tobacco.

Research Design, Sampling Procedure and Sample Size.

The study employed cross section research design whereby data was collected at a single point of time on variables required. This type of design allows collected data to make inference about a surveyed population at one point in time Hall, (2011), and conducted at Tabora Region, Tanzania due to the fact that Cooperative Unions which are MILAMBO and WETCU in Tabora have bulk procurement of Inputs and others services because of the nature of their products which is Tobacco. The population in this study was= 50 cooperative union's managers, 10 suppliers and 40 board members.

However, the purposive and a simple random sampling procedure to select region and cooperative unions and Simple random sampling in the selection of respondents (cooperative union's managers, suppliers and board members) was employed. The choices of this technique rely on fact that all respondents in targeted population have an equal chance to be selected. It considered fair and allows for generalization.

The sample size for this study was obtained using sample size formula by Yamane (1967), as illustrated by formula as;

$$n = \frac{N}{1 + N(e)^2}$$

Where,

N = Target Population = 100

e = Standard error (5%)

n = Sample size

Therefore,

$$n = \frac{100}{1 + 100(e)^2} = 100$$

The sample size will consist of 80 respondents randomly selected. According to Matata *et al.* (2001) from 30 respondents or more is an adequate number for scientific research.

Methods of Data Collection and Analysis

Finally, the data collected was checked to avoid any errors or omissions and ensure they are consistent. The data was then coded into logical, descriptive, and meaningful categories to provide a framework for analysis. The coded data was then be entered into the computer for analysis by use of SPSS.

Quantitative data was analyzed through descriptive statistics and presented through percentages, means, standard deviations and frequencies. Multiple linear regression model was used to establish the relationship between the factors affecting and performance of procurement process in cooperative unions. The overall significance of the model was tested using analysis of variance by use of F statistic at 95% confidence level while the coefficient of determination R^2 was used to show the contribution of independent variables on the dependent variable. The following regression model was used in the study to analyze as presented in equation (1)

$$PF_i = \beta_0 + \beta_1 CA_i + \beta_2 CM_i + \beta_3 CD_i + \varepsilon_i \dots \dots \dots (1)$$

Where;

PF_i =performance of procurement process, CA_i = Contract administration, CM_i = Contract monitoring, and CD_i = Contract documentation

Findings and Discussion

This part presents, interprets and discusses the findings with respect to factors influencing contract management practice on performance of procurement process in cooperative unions, in the unions in Tabora Region, Tanzania.

Demographic sample characteristic of the respondents

A cross-sectional survey questionnaire was distributed to 80 cooperative union managers, suppliers, and board members in Tabora, Tanzania. In total, two cooperative unions were chosen to participate in the questionnaire survey. Following the missing of three filled questionnaires, there were only 77 usable responses, yielding a 96.25 percent response rate. A study with a response rate of more than 50%, according to Lakens (2022) is always considered good. As a result, the response rate of 96.25 percent was excellent and played a significant role in interpreting the study's findings and discussions.

In relation to for gender, 49 (63.6%) of the participants were male and 28 (36.4%) were female. This shows that gender was evenly distributed in the study hence significant to represent the interest both genders in the population. In terms of educational level, the following results were obtained: 31 (40.3%) of the participants had achieved diploma level, 21 (27.3%) of the other participants had achieved bachelor's degree level, 18(23.4%) of the participants had attained post Graduate level while 7 (9.1%) of the participants had attained

master 's degree level. This indicated that majority of the participants were well educated to give credible information sought by the researcher. The ages of the majority of respondents: between 25-34 years of age (67.5%); 35-44 years of age (20.8%); 45-54 years of age (16.9%); and 45-54 years of age 11.7 %.

As for working experience, most respondents (64.9%) had at least 1-5 years of experience. This was followed by results comprising: 6- 9 years of experience (28.6%); and, finally, more than ten years of experience (6.5%). The detailed distributions of the respondents are shown in Table 1

Ideology

Table 16:Demographic sample characteristic of the respondents

Items	Category	Frequency	Percentage
Gender	Male	49	63.6
	Female	28	36.4
Age	25-34	52	67.5
	35-44	16	20.8
	45-54	9	11.7
Education	Diploma	31	40.3
	Degree	21	27.3
	Post Graduate	18	23.4
	Masters	7	9.1
Working Experience	1-5 Years	50	64.9
	6- 9 Years	22	28.6
	10+Years	5	6.5

Source: Research Data, 2022

Outliers

Outliers are data points that differ from the rest of the observations in the data (Jones, 2019).

Box plots were used to detect outliers in contract management practices (contract documentation, contract monitoring, and contract documentation as shown in Figure 2 that no outliers were found in any of the cases.

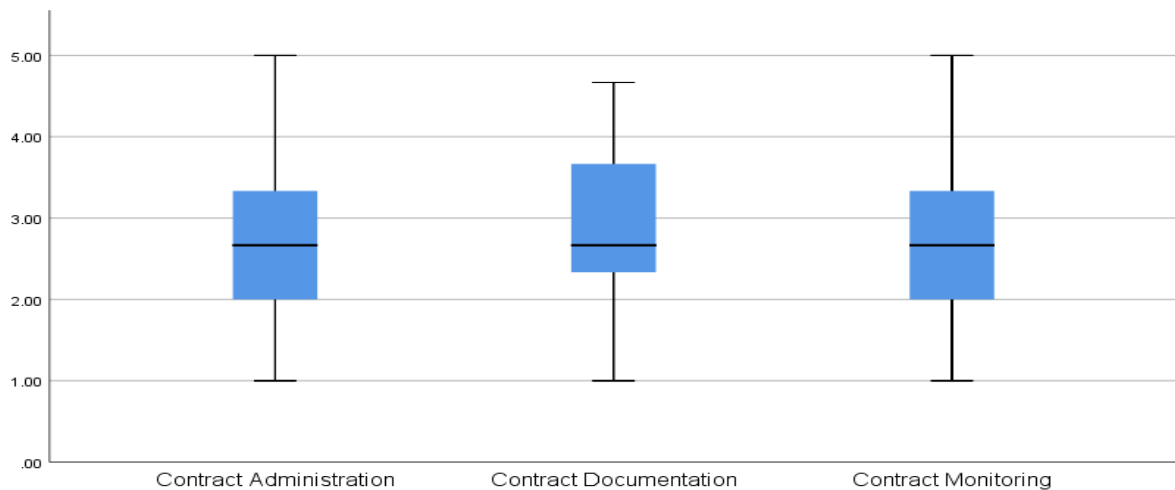


Figure 2: Box plot for Contract management practices

Despite the fact that there is no outlier in the contract management practices data shown in Figure 4.1, the line in the box plot indicates data skewness. Because the median is close to the lower quartile, data in contract documentations are not concentrated in the middle (Q1). In this variable the data does not have any effect since all the values in box plot are inside.

Multivariate assumption

The multivariate assumption was evaluated to see if any of the assumptions underlying multivariate analysis had been violated. We specifically looked into data normality, constant variance, and linearity. To determine the normality of the data, the distribution of the data was checked using Kolmogorov-Smirnova test, skewness and kurtosis. Skewness measures how symmetrical a variable's distribution is. If the distribution of responses for a variable skew to the right or left tail of the distribution, the distribution is said to be skewed. Kurtosis is a measure of how 'peaked' the distribution is (Bazavov et al., 2020). According to (Horvath et al., 2020), a general rule of thumb for skewness is that if the number is greater than +1 or less than -1, this indicates a significantly skewed distribution. The general rule for kurtosis is that if the number is greater than +1, the distribution is too peaked. Similarly, a kurtosis of

less than -1 indicates an overly flat distribution. The maximum absolute value of skewness was 0.201, and the maximum absolute value of kurtosis was 1.296. The assumption for the multivariate normal distribution of the data was met because the absolute values for skewness and kurtosis were less than 3 and 10, respectively (Mishra et al., 2019). Furthermore, Kolmogorov–Smirnov test is used since the sample size greater than 50 ($n \geq 50$) (Khater et al., 2020). For tests, null hypothesis states that data are taken from normal distributed population. when $P > 0.05$, null hypothesis accepted and data are called as normally distributed. All four measurement variables are normally distributed with .150, .630, .083, and .131 coefficients were statistically significant (as presented in Table 4.2)

Before conducting analysis, the missing value, outlier and multivariate assumptions (linearity, constant variance and normality of data) was checked.

Table 17: Tests of Normality

	Kolmogorov-Smirnov ^a			Skewness	Kurtosis
	Statistic	df	Sig.		
Contract Administration	0.101	77	0.15	0.201	-0.827
Contract Monitoring	0.101	77	0.63	0.201	-0.827
Contract Documentation	0.116	77	0.083	0.036	-0.702
Performance of Procurement Process	0.106	77	0.131	0.000	-0.414

a. Lilliefors Significance Correction

Test of validity and reliability of data

The construct's reliability of internal consistency was determined using Cronbach's alpha coefficients. Validity construct of the study was evaluated by exploratory factor analysis

Internal consistency reliability

Cronbach's alpha was used to estimate scale reliabilities; ten scales (Contract Administration, Contract Monitoring, Contract Documentation, and Performance of Procurement Process) had Cronbach's alpha greater than 0.60 as shown in Table 3

Table 18: Factor rotation matrix

Item	Component	Cronbach's Alpha	KMO and Bartlett's Testa
	1		
CTMP1	0.566	0.715	0.705
CTMP 2	0.321		
CTMP 3	0.425		
CM1	0.537	0.752	0.730
CM 2	0.464		
CM 3	0.228		
CD1	0.427	0.710	0.723
CD 2	0.446		
CD 3	0.459		
PPP1	0.825	0.648	0.659
PPP 2	0.37		
PPP 3	0.234		

Source: Research Data, 2022

Exploratory factor analysis

Exploratory factor analysis is a statistical technique for identifying a small number of individual factors that can be used to represent relationships between groups of many interconnected variables (Cichy & Kaiser, 2019). However, before conducting an exploratory factor analysis, the Kaiser-Meyer-Olkin technique was employed to assess the appropriateness of such a procedure (KMO). The KMO exceeds Kaiser's (1974) recommended value of 0.6, and the Bartlett's Test of Sphericity was found to be statistically significant ($\alpha = 0.005 < p \text{ value}$), indicating that the correlation matrix is factorable (Choi & Jeong, 2019). The exploratory factor analysis revealed ten factors with thirty items meeting

the retention criteria, accounting for 56.216 percent of the variance among the variables.

Table 3 displays the varimax-rotated component matrix results.

Contract management practice on performance of procurement process.

The researcher used a regression analysis to determine how contract management practice influences procurement process performance at a selected cooperative union in Tabora, Tanzania.

Model Summary

Table 5 model summaries were used to determine whether there was a significant relationship between the study variables.

Table 19: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.863 ^a	.785	.678	.013	1.843

a. Predictors: (Constant), Contract Documentation, Contract Monitoring, Contract Documentation

b. Dependent Variable: Performance of Procurement Process

Source: Research Data, 2022

The feedback on table 5 reveals that R Squared is 78.5 percent, indicating that variations in the three independent variables of this study, which are: Contract Documentation, Contract Monitoring, and Contract Documentation, explain 79 percent of the variation in cooperative union performance in procurement process. This was fairly a good model to be adopted. The unexplained variance of 21% is due to predictor variables that were not included in the model, resulting in a variation. The findings are consistent with previous research. The performance of the procurement process is influenced by various factors such as contract documentation, contract monitoring, and contract documentation in the procurement process (Montalbn-Domingo et al., 2019).

Table 20: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.532	2	5.766	6.342	.001 ^b

Residual	63.492	74	.858
Total	75.024	76	

a. Dependent Variable: Performance of Procurement Process

b. Predictors: (Constant), Contract Documentation, Contract Monitoring, Contract Documentation

Source: Research Data, 2022

The study feedback on table 6 revealed that the calculated F value of 6.342 is greater than the F critical value of 2.47, indicating that the overall model is statistically sound. The results of table 4.5 revealed that the P-value of 0.001 is 5%, which is significant. This indicated a statistical model fit, implying that the regression analysis was justified for this study, revealing a significant relationship between the study variables.

Table 7: Results of regression coefficient

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.675	0.202		28.14	0.000
Contract Administration	-0.074	0.015	-0.364	-5.107	0.000
1 Contract Monitoring	0.064	0.020	0.117	3.228	0.021
Contract Documentation	0.002	0.001	0.162	1.771	0.050

a. Dependent Variable: Performance of Procurement Process

Source: Research Data, 2022

The researcher used multiple regression analysis to determine how the study variables relate to one another. The study's findings on table 7 revealed that $\beta_0 = 5.675$ which represented the constant used to predict the value of performance of procurement process. The best regression model for the current study was as follows; PF_i = Performance of procurement process.

Using the established regression equation and taking all factors into account (Contract Documentation, Contract Monitoring, Contract Documentation) constant at zero, performance procurement process of the cooperative union in Tabora, Tanzania will be will be 5.675. The data findings revealed that when all other independent variables were set to zero, a unit decrease occurred in contract administration will lead to a 0.074 decrease in

performance of procurement process; a unit increase in contract monitoring will lead to a 0.064 increase in performance of procurement process and unit increase in contract documentation will lead to a 0.002 increase in performance of procurement process. The study variables had both a positive and a negative relationship.

At 5% significance and 95% confidence, contract administration had a 0.000 level of significance, contract monitoring had a 0.021 level of significant and contract documentation had a 0.050 level of significant, indicating that the most significant factors were contract documentation and contract monitoring.

The study findings contradict empirical studies conducted by previous researchers in other study contexts. Nazifa & Ramachandran (2019) investigated the relationship between and procurement performance process in Malaysia cooperatives. A case study design was used in the study. The study's findings revealed that contract documentation, contract monitoring contract and documentation measures were significant indicators of procurement performance process in Malaysi cooperatives association. Other findings revealed that, in terms of contract documentation and contract monitoring, the quality of goods and services offered was more highly valued by members of cooperatives. According to the study, budgetary controls and audit processes were important indicators in the public domain of Malaysia of cooperatives associations. The study was conducted in Malaysia rather than Tanzania, resulting in a contextual gap.

Conclusion

In Tanzania, cooperative union performance of procurement process and factors affecting performance procurement process were found both to be positively and negatively correlated, according to the study's findings. The study's findings show that at 5% significance and 95% confidence, contract administration had a 0.000 level of significance, contract monitoring had a 0.021 level of significant and contract documentation had a 0.050 level of significant, indicating that the most significant factors were contract documentation and contract monitoring. In this regard, cooperative union should think about integrating contract management practices (contract documentation, contract monitoring, contract documentation into their procurement processes that involve all stakeholders in order to raise the performance levels of procurement that enhances flexibility, transparency, and accountability.

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The Role of Financial Literacy on Financial Preparation for Retirement Life among Public Primary School Teachers in Dodoma City

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Abstract

Financial preparation is important to equip individuals with the essential knowledge, abilities, attitude, and confidence to prepare themselves for retirement life; this can be made possible through having adequate financial literacy. This study employed a cross-sectional research design in understanding the role of financial literacy among public school primary teachers in preparations for retirement life. Detailed and in-depth data were collected using interviews, focus group discussions and documentary review and analyzed using thematic analysis. The findings of the study revealed that financial literacy improves the capability of public primary school teachers on financial matters as it helps them to prepare for retirement by involving themselves in financial affairs and enhances their competencies in financial decision-making. The study concludes that financial literacy among public primary school teachers plays a major role in enabling them to make good financial decisions and, financial management and paves the way to financial access. The study recommends that the ministry of finance, the ministry of labor and the Ministry of Education in Tanzania needs to formulate and implement policies and programs that support and strengthen financial literacy among Tanzanians and public employees.

Keywords: Financial preparation, financial literacy and retirement life.

Introduction

Introduction of the Problem

Financial preparation allows a worker to have a realistic image of retirement living and reduces retirement anxiety. In other words, it seeks to improve potential retirees' adaption to retirement and give support in dealing with another stage of life (Choe *et al.*, 2019). By developing and running down resources, working individuals can make arrangements for their retirement, and more generally, tailor their consumption patterns to their requirements at different ages, independently of their income at each age. The side of layers can also continue to play an imperative part in assisting by offering retirement plans alongside education and

planning tools, employee to adequately prepare for retirement, he or she may need to seek enough information and advice about retirement life, and finally take financial preparation action (Nolan & Doorley, 2019).

During the employment lifetime, employees need important aspects for financial preparedness where financial literacy is one of the important aspects which can be facilitated by employers or employees' efforts to ensure the ability to prepare for financial stability after employment. Financial literacy needs detailed training to be provided to make employees aware of financial matters (Clark *et al.*, 2019; Coxwell, 2020; Divers & McHale, 2021). Financial literacy is a more important aspect of financial preparation because employees need to acquire financial skills like earning, spending, borrowing, protecting and saving during their employment life to be stable financially and sustain their life after retirement (Coxwell, 2020).

Globally, retirement readiness varies across countries, and more needs to be done to help people in all countries to be more prepared for retirement since pre-retirement anxiety is caused mainly by a lack of preparedness (Transamerica Global Retirement Survey- TGRS, 2018). For example, in developed countries such as; the United States of America, Australia, and Germany, employees who are not well prepared normally try to retire, and then they find out that they are unable to do so due to several factors. Such factors include; the reduction of benefits amount, the raising age limit for one to start acquiring pension benefits, and, the need to add more amount of money to start getting benefits. Moreover, most employees in developed countries overspent money during their employment life (Umpierrez, 2019).

In developing countries such as Malaysia, Thailand, and Indonesia many pre-retiring employees are anxious, most of them are unprepared, and they lack essential knowledge on the best way to have a successful retirement life. This is because of the absence of professional financial guidance and exhaustion (Divers & McHale, 2021). Eventually, retirees in most developing countries, such as Filipinos opt to live together with their grown children who will take care of them financially; similarly, the larger part of them opt to have post-retirement employment to supplement their living (Nordheim & Kvist, 2022).

On the side of Africa such as in Ghana, the majority of low and middle-level income earners in the public sector are not able to save because their life is already financially strained (Kumankoma, 2021). For example, in Kenya, pre-retirement preparations programs in public

service are insufficient due to employees have not limited education on retirement life and low salaries (Muriithi *et al.*, 2021). Likewise, in Uganda retirees face inadequate knowledge and lack of preparation on how they will endure both mentally and financially during their post-retirement life. This is compounded by the consequences of benefits dependency syndrome where employees are guaranteed that the government will provide a financial retirement package and continue offering monthly pay until when one passes away (Boko, 2019).

On the side of Tanzania, retired civil servants face a lot of challenges such as insufficient benefits, and complaints about the amount employees contribute being high while the estimated benefits to be received are relatively low (Ahmed & Wang, 2018). To improve the lives of retired civil servants, several efforts have been made by the Tanzania government to increase the government spending on social security through pension schemes yet, many pensioners still complain about a lack of enough finances for their well-being (Nyangarika & Bundala, 2020). Perpendicular with the establishment of the regulatory framework is governed by the Tanzanian Public Service Retirement Benefits Act of 1999, Zanzibar as a semi-autonomous state of the United Republic of Tanzania, retirement is also governed by Zanzibar Social Security Fund Act No.2 of 2005. Under both Acts, retirees receive funds from the identified fund scheme which base on the monthly contributions of particular employees and employers during their working Life (Nyangarika& Bundala, 2020; Ahmed & Wang, 2018).

Despite efforts done by the government of Tanzania to prepare the retirement life of its public employees through pension schemes, the majority of retired public servants continue to live vulnerable lives due to, poor health, lack of health insurance, inability to maintain income earning, and accumulated debts (Timothy & Nkwama, 2017). For example, the majority of public servant retirees face the inability to afford basic needs and health insecurity because they are unable to earn sufficient income (Namala, 2019).

Importance of the Problem

Empirically, most of the studies on the financial preparedness of public employees for retirement life (Ketkaew *et al.*, 2019; Mndzebele & Kwenda, 2020; Ghimire, 2022) have been conducted outside the Tanzanian context. On the side of Tanzania, most of the studies conducted (Ahmed & Wang, 2018; Ahmed & Ndyali, 2018; Makona, 2020; Nyangarika & Bundala, 2020) have exclusively focused on the impact of retirement benefits on retirees,

challenges of retirement education to workers and retirement income plans. Consequently, little is known about financial preparedness for the retirement life of Tanzanian public employees particularly public primary school teachers. Therefore, this study was conducted to explore the role of financial literacy on financial preparations for retirement life among public primary school teachers in Dodoma City.

Study Objective and Research Question

The objective of this study was to determine the role of financial literacy on financial preparation for retirement life among public school primary teachers in Dodoma City. Basically, it sought to answer the question; what are the roles of financial literacy in financial preparation for future retirement life among public primary school teachers in Dodoma City?

Methods

This study was conducted in Dodoma City; the area is selected due to its rate of growth and the shift of a capital city from Dar es Salaam to Dodoma, thus comprising different employees who come from other regions of the country. In this study, the unit of analysis was the primary teachers from government schools in Dodoma City aged between 40-59 years. This unit of analysis was selected because the topic needed views, ideas, and opinions on financial preparedness for retirement life from a specific group of employees who were near retirement age.

The researcher gathered information from participants until the saturation point of the needed information, the saturation point of information was preferred because the study used a qualitative approach that needed detailed information by acquiring ideas, opinions, and various views from participants. The sample size obtained was 35 participants. In the study, a qualitative approach was used because the study was based on a conversation that needed narration of face-to-face interviews and focused group discussion from participants. The aim was to acquire in-depth information form of views, opinions, and people's experiences (Adedoyin, 2020).

The research design used in this study was the cross-sectional design because it is a design that allowed a researcher to collect information at a single point in time. Also, is relatively cheap and less time-consuming than other types of research design, allowing the collection of information from different participants and comparison between groups and capturing

specifically required information in time. Purposive sampling was selected in this study because it provided a chance for the researcher to choose participants who could provide the best-required information on financial preparedness for their retirement life. According to Oribhabor (2019), the purposive sampling technique is a type of non-probability sampling technique which means that respondents from the population under the study have no equal chance to be selected for the study.

According to Madill (2021), an interview is widely used in collecting qualitative data. The participants interviewed, are those who are knowledgeable and have detailed information concerning the study. This method enables the researcher to understand what the respective respondents feel and think in their minds about something and provided in-depth information with a quick and positive response from participants. Thus, this method was used in this study to gather information from employees aged 40-59 years with the guidance of an interview guide.

The Focus group discussion method was used in which discussions were guided and monitored by a researcher. Thus, five focus groups discussion of six participants each were formed from five schools, and participants for each group were obtained by selecting three participants aged 40-49 years and other three participants aged 50-59 years. These discussions were conducted in the school's offices because it was easy to gather them together. The documentation review method was also used in this study by evaluating existing documents and compiling the documents that were relevant to the study. The study collected qualitative data and analyzed them using the thematic method. The thematic analysis was used because it allowed a researcher to take a body of data which was often quite large and group them according to similarities to get themes that make sense of the topic under study.

Finding and Discussion

The researcher determined the role of financial literacy on financial preparedness by interviewing and discussing with public primary school teachers and thereafter kept the findings in form of themes which are presented and discussed in the subsequent section;

Financial Decision Making

According to Koziol and Beyer (2021), decision-making is the most common way of making choices by identifying choice options, gathering information, and assessing alternative solutions. Using a step-by-step decision-making process can assist to make more deliberate and insightful choices. Findings in this study revealed that most of the participants (31 out of 35) confessed that financial literacy helps them in financial decision-making. Mostly, this is the result of retirement seminars provided to them by Bank institutes, the National Institute of Productivity (NIP), Public Service Social Security Fund (PSSSF). The knowledge provided has affected the public primary school teachers with good choices on financial matters. Financial literacy pursued public primary school teachers with formal financial decisions through critical thinking, decisive reasoning, and a comprehension of key monetary realities and ideas.

Findings of this study further revealed that good financial decision-making assists public primary school teachers with weighing choices and making a sound judgment on what to do on investment and loan taking for their financial circumstances. Good financial decision-making helps with how and when to save and spend, looking at costs before a big purchase, and making arrangements for retirement or other long-term savings. For example, one of the employees from an interview session said that *"We attended the seminars and got an invitation from NIP for financial literacy, which help us to make a good decision on what to do and good use of our money. It helps us to know good choices that will have a positive impact on financial matters for our coming retirement life"*. **(An interview with the participants was conducted at Kikuyu primary school on 23 Mei, 2022).**

Public primary school teachers with financial literacy have better preparation towards retirement life by having good choices on investment, landing loans and usefulness of the resources which improve their economic status. While public primary school teachers with lower or less financial literacy (4 out of 35) saw they did not have good strategies towards financial preparations most of them fall into losses and wasting of time. This finding implies that there is a relationship between financial literacy on financial decision-making whereby helps public primary school teachers to have good choices on financial matters towards retirement life. It furthermore helped public primary school teachers to escape from trapped loans and high debts from various financial institutions. Empirical findings in line with this finding by Dhlembeu *et al.* (2022) revealed that financial literacy builds an individual with financial habits, norms and values, and standards for day-to-day financial lives that carry them to good financial decision-making. Likewise, according to Fauziah *et al.* (2019),

financial decision-making builds the capacity to effectively manage money and respond quickly to financial decisions or challenges.

According to Muriithi, *et al.* (2021), financial habits and standards permit an individual to pursue financial decisions more because of their mentalities, values, feelings, normal practices, and context-oriented conditions. Another scholar (Mndzebele & Kwenda, 2020) revealed that a key tool of financial decision-making is to Perform Financial Statement Analysis, which helps to have good options among the variety of decisions. Therefore, the empirical finding is in line with this finding also revealed that Performing financial statement analysis can help in decision-making on financial matters.

Financial Management

The meaning of financial management as defined by Mansori *et al.* (2019) is a critical action that comprises arranging, sorting out, controlling, and checking financial resources with a perspective of achieving financial objectives. It is a standard method for managing financial activities, such as procurement of funds, usage of assets, accounting, installments, risk sorting, and other things related to money. Findings in this study revealed that the majority (29 participants out of 35) agreed that financial literacy builds public primary school teachers with the capacity for financial management. It increases cognitive understanding to them of budgeting, priorities, managed to spend and costs in their daily lives.

Moreover, public primary school teachers follow their financial tendency, past and present financial performance, and check financial indicators, such as gross profit margin, working capital, and return on the value that outfits them with a comprehension of financial well-being and commitments to their essential goals. The employee from the interview session said; *"The financial management ability helps us to control our money and to use it appropriately according to the important needs that are favourable for the economic status we possess, we use it as a guideline to our daily life on purchasing and investment that made us run on our budget"* **(An interview with the participants conducted from Dodoma Kilimani primary school On 16 June 2022).**

Moreover, public primary school teachers with financial literacy were able to have good management of their resources, especially money. This increases their capacity to have good spending and good utilization of their income and economic activities. Meanwhile, the public primary school teachers with lower or less financial literacy (6 participants out of 35) said

that they could not manage well their incomes and various activities they established for financial stability towards retirement life. This finding implies that the public primary school teachers in Dodoma City have profited from financial management which helps them to control their budget, spending, commitment, and confidence in financial management. For example, from the findings, most of the participants (29 participants out of 35) have been using financial management in their financial matters which helps them to manage, resource usefulness and effectiveness in their financial activities.

Similarly, other empirical studies such as that of Munkwa *et al.* (2021) revealed that financial management is fundamental financial expertise in budgeting that all managers and decision-makers should have, also budget is an essential instrument that guarantees an organization reaches its objectives. Fauziah *et al.* (2019) also observed that the absence of financial management hampers the financial preparation of employees for retirement life and affects their capacity to contribute and save their income. Another empirical finding by Mansori *et al.* (2019), explained that financial management behaviour is an individual's capacity to regulate, budget, plan, review, manage, and control financial assets. Therefore, financial management can encourage public primary school teachers in Dodoma City to practice sound financial advances in economics, business, and management that increase confidence in financial preparedness for retirement life.

Improves Financial Access

According to Honohan *et al.* (2008), financial access is the use of financial services by individuals and firms which allow individuals and firms to take advantage of opportunities, invest, save and insure against risk. Findings in this study revealed that 21 out of 35 public primary school teachers in Dodoma City were accessing financial services, familiarizing themselves with and accessing financial matters easily by increasing their ability to understand financial sources. Furthermore, the study found that public primary school teachers in Dodoma City could compare options and negotiate with financial institutions to occupy opportunities to prepare financially for their retirement life.

This was confirmed by one of the employees from the key informant who said; *"Employees take money from various institutions and SACCOS for solving their responsibilities, that they are not limited to take loans from one institution, they can take from different places and at the same time, also they can negotiate with institutions on taking loans depending on their economic capacity situations. They can understand various opportunities around us that can*

facilitate ta have options on what opportunity to take or access" (An interview with the participants conducted from Kizota primary school on 14 June 2022).

The study found further that, public primary school teachers with financial literacy created a wide room for financial access by identifying opportunities easy and access to financial institutional services. Moreover, they used that opportunity to have better preparation of their retirement life by accessing financial sources adequately. While public primary school teachers with lower or less financial literacy (14 participants out of 35) did not have the knowledge and wide room for financial access due to, they are not aware of where and how to access financial sources for financial preparation. This finding implies that the knowledge on financial access gives public primary school teachers in Dodoma City wide knowledge on surviving in the financial environment by having the ability to access various financial sources and opportunities that gives the ability to employees with good environment towards financial preparation.

Empirical findings in line with this finding by Susan, (2020) revealed such ideas as expanding financial access should have been one of the key plans of the government plan for the development of public employees. According to Wachira and Kihui *et al.* (2019), the efforts to access financial matters in African nations remain low but it is important to be a tool to the society in order on financial matters. Gathiira *et al.* (2018) found that it is broadly accepted, expansion in financial access would assist individuals to settle on choices towards financial services and investment. Therefore, financial access is important to public primary school teachers in Dodoma City which allows them to access financial matters like financial institutions services, investments, etc. for financial preparedness for their retirement life.

Another empirical study on financial access by Moulton (2022) revealed that financial access ensures and encourages the mobilization of savings that are essential to economic development. It revealed further that accessing financial services expands the income capacity, and simultaneously, the saving increases in an individual. Likewise, according to Buchdadi *et al.* (2020), financial literacy increases financial access through the development of knowledge, giving a favourable business environment, developments, and adoption of innovation in technology and services that lead to access to formal financial services easily. Therefore, financial access is needed for public primary school teachers in Dodoma City as it provides them with a wide range of to access financial matters towards financial preparation for their retirement life.

Conclusion and Recommendations

Conclusions

The study concludes that financial literacy among public primary school teachers plays a major role in enabling them to make good financial decisions and, financial management and paves the way to financial access. Most of the public primary school teachers in Dodoma City who acquire financial literacy had good economic stability compared to public employees who did not acquire it. Financial literacy helps public primary school teachers to have qualities of making good financial decisions, financial management and financial access to financial matters. Public primary school teachers who did not acquire financial literacy brought them to lack those qualities which are essential for their financial preparation towards the retirement life.

Recommendations

The study recommends that the ministry of finance, the ministry of labour and the Ministry of Education in Tanzania needs to formulate and implement policies and programs that support and strengthen financial literacy among Tanzanians and public employees. This will increase the ability and qualities of public employees in financial decision-making, financial access, and financial management on financial matters.

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Effects Of Compliance on Documentation Procedures in Containers Cargo Handling Perfomance: A Case of Tanzania Port Authority

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Abstract

The study involves an assessment of the factors affecting container cargo handling performance the case of Tanzania port authority at Dar es salaam port container terminal. It is a quantitative study employed the cross-sectional design comprises data gathered through questionnaire while analysis done through the descriptive statistics (Mean and standard deviation scores), 5 points Likert scale and inferential statistics multiple regressions. The results indicate compliance to documentation procedure model fit statistically significant of $R^2 .893$ (89.3%), $p .000 < .05$. While significant positive relationship was observed on the Easy accessibility to tax information, Availability of accurate documentation & information and collaboration with channel members. The significant negative relationship on sharing of data and negative non-significant effects on Less time-consuming in procedure and documentation. Finally, the study recommends container cargo handling stakeholders to fully utilize the One Stop Centre established, provide more technical quality trainings to improve staffs' knowledge and skills as well as ordering more modern equipment in container handling. However, future studies needed on usage of containerized cargo handling system in transforming speed and efficiency in maritime logistics and supply chain. Also, on effects in terms of time, services time, operators' capacity, berth utilization, service provision time (dwell time, waiting time) towards container cargo handling operations performance.

Key words: Cargo Handling, Performance

Introduction

Basically, prior the advent of the container transportation, the cargo handling were mostly ineffective, high costing and time consuming as dry cargo ships spent much operational time in ports, waiting, cargo loading and unloading (Song, 2021). This necessitated the dramatic enhancements in cargo-handling processes and operations including the introduction of containerization cargo shipping. Hence, the introduction and rapid growth of container cargo handling system since 1950s believed to cater the loose cargo handling problems (UNCTAD, 2019; Jonker, et al., 2021). Surprisingly it created the new problem of container cargo handling traffics in the port terminals against of its introduction goal of improving maritime international logistics and supply chains performance.

In contemporary world, the problem of poor container cargo handling performance has been increasing in in North-East Asian sub region such as China still faces inadequate infrastructures capacity (Liu, 2017). Similarly, North Korea lacks freight cargo base and capacity for handling containers, while Japan ports are time-consuming and complex port procedures and documentations. In Africa Usman 2015; Shobayo et al., 2019; studies indicate that still the situation of containers cargo handling is very challenging undermine the African ports performance. Hence, it reflects that besides of its importance the containerization has not matched with the efforts and measures taken by countries to accommodate its advancement needs.

The uses of the containers in international maritime trade have been growing particularly in containers goods and services important in facilitating imports and exports trade. Currently, container cargo occupies over 70 percent of maritime business this also creates handling poor performance problems worldwide. In response, countries and ports to devote comprehensive plans and efforts in port reforms and huge investments though it could not solve the container traffics. Van Hasse, (2016) identified these efforts including introducing big development and investments in the port's infrastructures, Information communication technology superstructures facilities, and equipment, comprising getting container cranes and yard equipment's, developing bigger terminal sites and stowage facilities and improving berth yard-gate processes. In line with Hervás-Peraltaa et al, (2020) affirmed that up to 21st century science and technology development still container cargo handling practices such asloading/offloading services, warehousing and transportation is still challenging worldwide. In most of ports the performance of containers cargo handling at the ports terminals

encompasses entirely undertakings associated to cargo handling on board of the vessel (stevedoring) and cargo handling on shore (quay handling).

Studies done the container cargo handling identified several factors associated with poor performance. These includes technological skills and knowledge, berth, quay, and mechanical handling equipment availability and capacity and communication, long documentation procedures, tax administration increasing que in container cargo handling (Omary, 2017; Riky, 2018; Jonker, et al., 2021). This also noted by Mapunda (2016) that the increased containers traffic is linked with poor performing in container cargo handling seriously affecting port role as knob in international trade logistic chains. That in turn affected the maritime logistics and transportation industry as well as port performance in both productions to consumption points. Hart, (2019) study associate the poor performance with resources utilization, port structures, intermodal facilities, dwell or lead-time, equipment capacity, skilled labour, technology (automation level) and integrated partnership among cargo handling stakeholders. As a result, this inefficiency drawn attention of various scholars, investigators and business practitioners in recent decades due to the rapid growing of its consumption.

In Tanzania containers cargo handling continues to significant challenging problem despite of huge investment and policy reforms to improve container cargo handling performance. The government of Tanzania to devote huge resources in the development of staff knowledge and skills, integrated documentation communication technologies, infrastructures, superstructures and facilities to increase efficiency handling liquid and dry cargo. These includes improvement of 11 deep-water berth of 2600 meters having modern equipment, inland container depots (ICDs) and container freight stations and privatization of container terminal to Tanzania International Container Services Ltd (TICTS) service provider (TPA report, 2020). Unfortunately, Dar es salaam port frequently faces high containers traffic and delay of 5-7 days of containers cargo handling against the international standard of 3 days (Maneno, 2019; TPA report 2021).

From the background above it widely accepted that despite the all efforts and development made in the Dar es Salaam port cargo handling operations still its performance is very challenging. It is widely being faced by inefficient terminal and low speed in cargo handling on which it was anticipated to increase efficiency and speed that would enhance container terminal performance. It has been difficult for the TPA to effectively manage an increasing

freight rate charged to shipping lines, turnaround time of ships, clearance time, poor intermodal transport, container traffic and cargo dwelling time.

Literature Review

The container cargo handling plays the potential role in international trade facilitation and country economic growth, it also permits economies of scale, easy cargo management, flexibility, enhanced transportation speed, high safety and security through reduced damages and theft etc (Ismail, 2019). This challenges the potential role of container cargo handling in the trade facilitation and significant contribution to country economic growth, it has been broadly facing the low performance in many ports, poor ship turnaround times, poor timing etc.

In Tanzania, studies related to port performance in container cargo handling indicates the practice has been inefficient resulting to high port container traffic, poor handling service delivery, high dwell time, (Omari, 2019; Maneno, 2019; Magenge, 2020). In addition, the TPA (2020) report indicates despite many efforts done still the port have unsupportive infrastructures and superstructures, inefficient ICT integrated documentation systems and low port automations, insufficient modernization of cargo handling facilities and inadequate knowledge and skills among staffs. Hence, these increasing container cargo handling performance problems indicate the gap between the efforts done and actual practice that create need of comprehensive study. This is the basis of this study in assessing the factors affecting performance of containers cargo handling.

Based on the compliance to documentation procedures on container cargo handling performance. Studies indicate that containers cargoes handling services have been largely affected by long and bureaucratic procedures in documentation process resulted to congestions of the containers at many ports (Umenweke, & Ifediora, 2016; Maneno, 2019). This result to skipping of some procedures or forging by providing bribes to responsible officials in container handling system. The situation necessitated the review of documentation process that comes up with system such as integrated tax system such as TANCIS and single window system. Furthermore, designing, organizing and implementation of the integrated revenue (tax and customs), inspection and approval administration system has been important

in responding to poor service delivery at the ports. In addition, Hlali & Hammami, (2019) assert that the hinterland containers cargo handling operations faces delay in outbound and inbound in containers to railway terminals and long road truck ques due to long and bureaucratic documentation procedures in clearance process and transportation permits. This has also noted in Tanzania that container documentation for clearance has been continuing problem as it involves multiple government agencies for documentations, inspections and approvals.

Methodology (Method)

The study assessed the factors for container cargo handling by examining the compliance to documentation procedures effects on container cargo handling performance. The study was conducted at Tanzania Ports Authority (TPA) container terminal in Dar es Salaam region because; the area has the largest container terminal handling operations in Tanzania (TPA report (2021). This study has employed the cross-sectional design because it is cheap and provides a portrait of information at single point in a time across target groups and collects data to make inferences about a population of interest (universe) at one point. The target population comprised 175 employees in the TPA container terminals, documentation, marketing, clearing and forwarding as well as operational staffs' prior the actual selection of the sample of 61 participants (TPA Report, 2021).

Whereby, sampling techniques involved purposive sampling technique were employed to select 10 managers and head of departments from TPA container terminals and head office employees. Also employed the simple random technique to select the respondents from TPA container terminals operational staffs. The primary data gathered directly from the respondents through questionnaires that included mmultiple selection and 5-point Likert scale questions.

The study data analysis was done through SPSS version 21 expending linear multiple regression analysis. And descriptive statistics (Mean and Standard Deviation scores) This involved the developed model of effects of compliance to documentation procedures on container cargo handling performance.

Regression analysis model was represented as follows;

To examine the compliance of documentation procedures in containers cargo handling.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

Where;

Y = Container's cargo handling performance

X₁ = Availability of accurate documentation & information

X₂ = Easy accessibility to tax information

X₃ = Improved collaboration with channel members

X₄ = Improved information/Communication

X₅ = Integrated sharing of data)

X₆ = Less time-consuming

β_0 = is the Y intercept is constant dependent variable value, independent variables remain 0.

$\beta_1, - \beta_6$ = regression coefficients/constants of independent variables of X₁, -X₆ in relation to Y.

e = the error term

Reliability and Validity of the Research Instrument

The study checked reliability and validity to measure study objectivity and trustworthiness. Test-Retest Reliability consistency or repeatability done by administering the alike questionnaire twice in dissimilar occasions to TPA container terminal respondents the similar answers were observed. Validity of the Research Instrument was pretested to ensure that they can yield the valid data concerning research problem. The developed questions pre-tested to some of the TPA container terminal employees to determine perplexing questions in the tools and rectified accordingly.

Results And Discussions

The Effects of compliance to documentation procedures in containers cargo handling performance.

The study examined the effects of the compliance to documentation procedures in containers cargo handling performance.

The Effects of Compliance on Documentation Procedures

The model involved the examining of the predictor's effects including Less time-consuming in procedure and documentation, Improved collaboration with channel members, Information/Communication, Integrations (Integrated sharing of data), Easy accessibility to tax information, Availability of accurate documentation & information have significant collective effects on the performance of container cargo handling at the pots (response).

Table 1: Model Summary effects of compliance on documentation procedures

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.959 ^a	.921	.911	.36275

Source: Field collected data 2022

The results in table 1 indicate strong variance of relationship between predictors and response variable of R^2 (.921). This specifies the proportion of variations of 92.1% of factors affecting in the dependent variable (container cargo handling performance) depicted by six predictors variables in the model. This high R^2 obtained specifies the model paroxysms data signifying the key documentation procedures effects predictors have encompassed in the study model.

Table 2: ANOVA^a Effects of compliance on documentation procedures

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	76.298	6	12.716	96.639	.000 ^b
Residual	6.579	50	.132		
Total	82.877	56			

a. Dependent Variable: Container cargo handling performance

Source: Field collected data 2022

The table 2 ANOVA findings indicates F statistics of $F(6, 50) = 96.639$; Sig .000 < .05. p-value). The model indicates low p value (Sig.) compared to the .05 significance level. This concludes that the overall model of the documentation's procedure compliance effects on the container cargo handling performance is statistically significant. Though F statistics and Sig. coefficients values illustrates adequate evidence to conclude that individual effect in the model is significant. Yet generally it is not sufficient to conclude that the predictors are only the overall documentation procedures effects that significantly increase containers cargo handling performance.

Table 3: Regression Coefficients Effects of Compliance on Documentation Procedures

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.358	.202		1.774	.082
Availability of accurate documentation & information	-.206	.382	-.200	-.540	.591
Easy accessibility to tax information	1.666	.417	1.63	3.99	.000
Improved collaboration with channel members	-.062	.043	-.060	-1.44	.046
Information/Communication	-.054	.371	-.054	-.146	.884
Integrations (Integrated sharing of data)	-1.413	.564	-1.38	-2.51	.015
Less time-consuming in procedure and documentation	.963	.366	.947	2.63	.011

a. Dependent Variable: Container cargo handling performance

Source: Field collected data 2022

From table 3 results show both negative and positive directions of the relationship between the factors affecting (predictors) container cargo handling system performance at the port.

The results show the significant positive relationship on the Less time-consuming in procedure and documentation (Beta .947; Sig .011). This reflect that less time-consuming in procedure and documentation has positive significant relationship with container cargo handling system performance at the port.

Easy accessibility to tax information (Beta 1.63; Sig .000) on compliance with documentation procedures effects with container cargo handling performance. This suggests the increase of a unit of the compliance to documentation procedures factor has significant effects on the performance of container cargo handling.

On contrary the significant negative relationship also observed on Integrations (Integrated sharing of data) (Beta -1.38; Sig .015) indicating negative significant relationship effect to container cargo handling system performance at the port.

While, Improved collaboration with channel members (Beta -.060; Sig. 046) indicating that the decrease of a unit of the compliance to documentation procedures factor has significant negative effect on performance of container cargo handling.

The regression results also indicate the negative non-significant effects of compliance to documentation procedures on Availability of accurate documentation & information (Beta -.200; Sig .591). This indicate that when one unit of Availability of accurate documentation & information increases it decrease the performance by-200 value and not significant.

Information/Communication (Beta -.054; Sig .884) has negative effects towards container cargo handling performance and not statistically significant. The findings suggest that the despite the deficiencies in container handling such as dwell time, congestion, the Dar es Salaam port, yet compliance to documentation procedures has significant effects on the performance of container cargo handling operations.

The Benefits of Documentation Procedures Compliance in Container Cargo Handling System

On other hand there are other effects of complying to documentation procedures found in descriptive statistics findings during survey. Most of these effects rely on the benefits of compliance to documentation procedures as shown in the Table 4 below;

Table 4: Effects on benefits of documentation procedures compliance in container cargo handling system

Benefits effects	N	Mean	Std. Deviation
Timely knowing location of containers	59	3.58	1.30
Easy identification of a size, type, codes and contents	57	3.46	1.19
Identifying container identification number	57	3.44	1.13
Verifying authorized agent of the cargo owners at terminal gates	57	3.28	1.26
Efficient tax calculations	57	3.19	1.21
Enabling transport management in terms of units	57	3.05	1.30
Valid N (listwise)	57		

Source: Field collected data 2022

The table 4 descriptive findings indicate different levels of consensus or Likert scale levels of respondents on the benefits accrued by Dar es Salaam TPA port by complying with documentation procedures in container cargo handling. The very high consensus (strongly agreed 5pts) of respondents observed on effects on the benefits accrued by Dar es Salaam TPA port include; Timely knowing location of containers (Mean 3.58 and Std. Dev 1.30).

Easy

Easy identification of a size, type, codes and contents (Mean 3.46 and Std. Dev 1.19) indicating high agreement of the respondents on its effect from benefit on container cargo handling performance. Moreover, to high extent consensus also found on Identifying container identification number (Mean 3.44 and Std. Dev 1.13) or (Agreed 4pts). Also, to moderate extent (Not Sure 3pts) found on Verifying authorized agent of the cargo owners at terminal gates (Mean 3.28 and Std. Dev 1.26). While Efficient tax calculations (Mean 3.19

and Std. Dev 1.21) representing (Not Sure 3pts) indicates weak effects to container cargo handling performance.

Also, weak agreement that the effects on benefit of enabling transport management in terms of units (Mean 3.05 and Std. Dev 1.30) has been significant to the container cargo handling performance at the port.

Discussions of the Results

The study assessed different factors that in way or another affects the container cargo handling operational performance at that port. The study results on compliance to documentation procedures factors effects on containers cargo handling performance indicates both negative and positive relationships between effects and performance.

This includes compliance to documentation procedures factors in the container cargo handling operations which is among the key factor on ensuring efficient container handling and delivery. For longtime import documents (Commercial invoices, authorization letter from importers to agents, permits, exemption documents, packing lists, bill of lading or other transportation documents, certificates etc) has been challenging at the port. In response the container terminal ports the Dar es Salaam port has instigated various integrated documentation initiatives to ensure timely and quality service provision in container cargo handling. These includes establishment of Integrated Communication Information Technology (ICIT), Introducing integrated electronic data interchange (EDI), Creation of Databases, Stakeholder's networking However, the findings indicate that TPA measures in enhancing the compliance to documentation procedures in containers cargo handling fails to guarantee the optimal efficiency in container cargo handling operational performance at TPA container terminals.

In the study, factors such as Integrations (Integrated sharing of data) and Improved collaboration with channel members, less time-consuming in procedure and documentation and easy accessibility to tax information found to be significantly propelled by enhanced documentation procedures at container handling. These are among the foremost and significant relationships with container cargo handling performance in maritime business. This was also complemented by modernization done on payment system through introduction of Integrated Electronic Payment System (IePS) connected with GePG and banks which is a single window system established in 2015 managed by TRA. This enabled the customers to easily access their invoices and ultimately make payments via an intertwined

multiple payment system. Though, these initiatives taken they did not manage to eliminate the blockades to the documentation's procedures. For example, frequently failure and breakups of the system has been major problem in system efficient. This similar to studies by Rooney (2016); Hart (2019) revealed the continuing poor container cargo handling and delivery is largely associated with bureaucratic and inefficient documentations systems at the ports.

Effects are also noted on the timely knowing location of containers; easy identification of a size, type, codes and contents; identifying container identification number indicated are effects derived from the benefits of container cargo handling system. Thus, compliance to documentation procedures through observed benefits are likely have significant effects in the above benefits. However, the less effects noted on Verifying authorized agent of the cargo owners at terminal gates and surprisingly on Efficient tax calculations as under normal circumstances documentation is basic element on tax calculation through findings indicate moderate relationship effects. While effects noted on Enabling transport management in terms of units mean that still at the compliance to documentation procedure is still low having the significant effects to transportation logistics within or hinterland transportations.

Despite the challenges noted in container cargo handling at Dar es Salaam port there is a notable improvement in the container movement. Among them is integrated and single window system, one stop center has cuts down documentation clearance procedures period from 72 hours to 48 hours. However, TPA has taken various measures to make sure all blockades on documentation are eliminated. This includes the establishment of One Stop Centre (OCP) in 2018 to improve documentation procedures to speed up the cargo clearance as it brings together all government agencies. This is a great development in container logistics payment system compared to previous systems that was featured with bureaucratic procedures. However, the findings indicate some deficiencies in the systems introduced in facilitating easy access of documents and procedures compliances by stakeholders. Similar shortage problems were identified by Liu, Xiang & Zheng (2017) indicating that bureaucratic importation and exportation documentation procedures cause poor berth allocations, as well as congestions of containers in many ports.

Based on Likert scale analysis the respondents had strongly agreed, agreed and not sure results to the benefits of documentation procedures compliance in container cargo handling system. The findings indicate high consensus of respondents observed on effects on the

benefits accrued by Dar es Salaam TPA port. Indicating that the compliance to documentation to procedures improved the accruing of several benefits to TPA. These involves identification of a size, type, codes and contents. It also assists the timely understanding of the containers can provide ample time for early clearance procedures prior container arrival hence containers timely delivery to the clients. Compliance to documentation procedures seem to assist to identify container identification number that make easy for tax administration, management and operations in handling container cargo. Thus, the benefit of identifying the identification number assist the operational activities in container cargo handling hence improves performance.

and verifying authorized agent of the cargo owners at terminal gates Indicating to have average effects on the container cargo handling hence performance. Surprisingly, findings indicate that compliance to documentation procedures has little benefit to efficient tax calculations. This contrary to the fact that documentation such as Bill of Lading, Cargo list and travel schedules of container are useful in early activities such clearance procedures etc. This indicates that respondents little support that effect on the efficient tax calculations has significant effects on container cargo handling.

The findings imply that the complying with efficient and appropriate documentation procedure on importation and exportations can significantly improve the container cargo handling performance, as access to various information is efficient. Magibho (2017) also argued that implementing the integrated documentation system always reduces ship turnaround, berth days, clearance time, loading and offloading so as speed up service provisions important in port congestions. The general indication reflects that despite of the notable improvement in container cargo handling operations contributed by port modernization process to simplify the compliance to documentation procedures still the process needs to be efficiently integrated.

Conclusion and Recommendations

Conclusion of the study

Based on the usage of containers in growing international trade it obviously, that the ports container terminals will record highest container shipping vessels compared to its capacity to handle them (UNCTAD, 2019). It has found that the actual handling of the container cargo remains unpromising and challenging in Dar es Salaam port according to international standards of 3 days. Following the increased container cargo shipping many ports including

in developed countries has resulted to traffic problems due to many shortcomings in their container cargo handling systems particularly in documentation procedures that propels the room in compliances. Today's general port-operating setting is featured by intensified port competitions, particularly in containerized trade, on which choices and decisions on shipping deals determined by capability of port structures, superstructures, human resources, container port terminal networking and integrated documentation systems.

From the literature and findings depicts that more than ever, ports and terminals all over the world requires to re-evaluate their documentation procedures, superstructures, structures, equipment, workforce skills and knowledge, technologies in container cargo handling operations to play their potential roles in global supply and logistics chains. It well agreed that though TPA ports are striving to embrace new technologies (ICT and integrated information system), modern equipment, knowledge and skills provision. However, all efforts do not manage to eliminate the discrepancies happening in container cargo handling performances.

Conclusively, besides of various measures taken by TPA in port documentation procedures container cargo handling operations still the congestions troubling the handling operations. These are associated with poor clearance documentation procedures compliance, infrastructures and superstructures, management shortages, delay in activating and usage of modern technologies, low performance of inland modes of transport, unethical issues (corruption/fraud/theft), poor intermodal transport system (road, railway) and bureaucratic port and customs procedures. Hence, container cargo handling operational performance has been inefficient not only at TPA ports but a globally in both developing and developed countries. This conclude that despite some notable improvement in TPA container cargo handling performance still needs more critical planning, investments, strategic setting and complying global conventional sustainability standards and objectives.

Recommendations of study

- a) It is important for container cargo handling stakeholders such as government agencies (TPA, TRA, TBS, immigration/police, WMA, TFDA, ministries, atomic commission etc.) to fully utilize the One Stop Centre for working together to ascertain and allow promptly and efficient documentation procedures as well as service delivery for enhancing port output, productivity, profitability and operational proficiencies to increase container cargo handling operational performance.

- b) From the policy perspective, the government have to review policies to make sure that all policy and regulatory contexts and are compassionate, supportive and flexible towards container handling operations productivity and performance.
- c) TPA management needs to ensure provision of appropriate Human Capital Development trainings to equip staffs with automated technologies and service to minimize human delays and errors in job performing.
- d) Ports should design and introduce the efficient integrated digitalized container handling system for accommodating integrated data exchanges and access among stakeholders to simplify the documentation procedures so as reduce time for container clearance and delivery.

Recommendation for future study

There need for further studies on the usage of containerized cargo handling system in transforming speed and efficiency in maritime logistics and supply chain.

In addition, the study has also to conduct on effects in terms of time, services time, operators' capacity, berth utilization, service provision time (dwell time, waiting time) towards container cargo handling operations performance.

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The Influence of Automated Teller Machines on the Customer Satisfaction at NMB Bank Plc in Dodoma City

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Abstract

Self-service technologies have been considered to solve the problem of receiving bank service through direct bank tellers. This paper assesses the usage of Automated Teller Machines on the Customer Satisfaction of NMB Bank Plc in Dodoma City. Specifically, the study focused on the usage of Automated Teller Machines self-service technology for the customer satisfaction of NMB Bank Plc in Dodoma city. This study is quantitatively designed and applied survey in data collection. Data were collected through the use of questionnaire. The findings revealed that ATM is applied for handling the diversity of function for example money transfer, and account checking balance. Also, findings show that ATM is applied every day with customers of NMB to handle different functions and transactions. Including transfer ATM application, money transfer, and account checking balance. The usage is driven reasons of avoiding bank queue, carrying cash unnecessarily, minimize disturbance in accessing bank services and saving time especially in cash withdrawal among the customers of NMB Plc Dodoma City. The study concludes that therefore, it is concluded that ATM is used at large in accomplishing several social and economic activities, thus customers of NMB Bank Plc in Dodoma city are satisfied with ATMs. This study recommends the management of NMB Bank PLC has to increase sensitization of usage of ATM functionalities to the customers.

Key words: Automated Teller Machines; Customer Satisfaction; Self-service technology; Dodoma city; direct bank tellers, NMB Bank PLC;

Introduction

Self-service technologies have been introduced in the early 1990, which solved the problem experienced in the 1980s with customers in obtaining bank service through direct bank tellers

(Ugwuanyi, Uduji, & Oreedu, 2020). It draws attention on the customers' preference of being served rather than self-service. This has gained a wide momentum especially in the reception of services among young customers (Kelly, Lawlor, & Mulvey, 2017). The self-service preference is limited as customers prefer to deposit and withdraw through bank teller for risk and security concern. The nature of services bank provides through bank tellers aimed to induce customers' satisfaction (Mwanajimba, 2019).

Self-service technology in the banking perspective facilitates entire digitalized banking system operation which is the conversion of data into a digital format through the technology. It is characterized by online banking, personal finance planning, mobile banking options, Unified Payment System (UPI) and digital wallet. This provides enhanced customer services, the provision of convenience through time saving and reduction of human error while building customer loyalty (Son, Kwon, Tayi, & Oh, 2020).

Self-service technologies are categorized in various dimension for example mobile banking, ATM, internet banking and money agents. These are example of self-service technologies which increases the access of bank service in many parts of the world. This has some culture reasons for the developed countries like USA in which most people prefer to save time and manage transaction in which the society accept change easily (Shahid Iqbal, Ul Hassan, & Habibah, 2018).

An automated teller machine (ATM) was developed in 1968 by Docutel and Wetzel in USA, the major use by that time was to handle money at the Docutel company customer use it and even pay fee for its usage. Later on, it advanced to be used to enable customer of financial institutions to facilitate financial transactions, such as cash withdrawals, deposits, funds transfers, balance inquiries, this provides an option at any time to access account information without direct personal contact with bank staff (Kaur, Krishan, Sharma, & Kanchan, 2019). Customers access the banking services through indirect means such as alternating teller machines, which provide interaction with customers to access banks services in a digitalized format abbreviated as ATM. It has different definitions in various countries for example in the United States is called automated teller machine, or sometimes shortened as ATM machine, in Canada the term is known as automated Banking Machine, in British English the term is also known as cashpoint, cash machine are mostly used (Saravanan, 2017).

Self-services technology generally originated from technical change through ATM (Mahdzan, Mohd-Any, & Hamzah, 2017). The developed economies mostly prefer to save

time and money through ATM application. For example, in the USA time saving relate to the self-service technology uses, in UK and Germany self-service technology facilitate business transaction and easy money transfers in various places (Baabdullah, Alalwan, Rana, Kizgin, & Patil, 2019).

South Africa was the first to use ATM in African countries through CellPAD technology to carry out new installations for the rapid use of ATM to handle cash transaction. ATM density in Africa is the lowest in the world, about 80% of the use of ATM in 2009 were concentrated in four African Countries such as Morocco, Egypt, South Africa and Nigeria. The money culture of many Africans is incompatible to ATM application, in which a considerable proportion of African still prefer paper cash rather than use banks (Dunne & Kasekende, 2018).

In Nigeria, Gololo (2018) argued the use of ATM is limited to the extent that high cyber-crime exists that limit transaction through ATM less usage is experienced. For example, in Uganda, Catherine, et al. (2018) argues that the usage of ATM facilities in the bank is low because of the fraudulent activities, this call for a need of attractive ATM facilities to handle bank transaction and user accessibility. In Malawi, Klapper, et al. (2019) contends that less ATM usage is experienced due to poor digital infrastructure that exists to handle the ATM installations.

In Ghana, Asante, et al. (2019) suggested that ATM as a new technology acceptability to its adoption is limited to the ability to operate, in which majority have limited knowledge to operate in cash transaction. In Kenya, Mwangi (2017) suggested that ATM use experiences has been a concern on the limitation of financial inclusion to the majority of the illiteracy and informal employment people. When it comes to Tanzania about 1400 ATMs exists in the whole country (Keskin, 2020). Salim (2020) suggested that ATM usage is vulnerable to the security concern in which customer less prefer to its applications, its adoption is less limited to the context and customers acceptability in the banking services. In the Urban area ATM usage is high compared to the rural counterparty because of the system of banking infrastructure that exist in urban areas, the nature of activities are so commercialized in urban areas where customers prefer to handle cash transaction in various services and purchases (Mchomba, 2018).

In Tanzania for example customers value the most to access bank transaction through direct bank teller or even nearby money agents rather than the use of ATM machines. Irrespective

of ATM availability in many commercial banks in Tanzania, but its influence is less valued as a result commercial bank retail customers prefer being served rather than self-service (Mwanajimba, 2019). Consequently, the visible long lines of retail customers waiting to obtain bank tellers' service.

ATMs are considered easy to use in the case customers are well experienced, ATMs extend bank services 24 hours a day, this has increased accessibility and ability to handle transaction among customers at any time. The easy and ability to save time in the transaction accessibility, easy network platform which increased the wider of cash transaction accessibility in various places (Mashenene and Mkende, 2019). CRDB has 551 ATMs, which are facilitated through a wide branch network of 260 in Tanzania, in which 12% of the customers use ATM. Akiba Commercial Bank has been ranked to have 123 ATMs and branches that are convenience and customer focused. Diamond Trust Bank has a branch network of 28 branches and 160 ATMs which are spread in the major cities (Lotto, 2019).

Data shows that NMB has over 4 million customers, with 272 branches, with ATM network that increased from 776 ATMs in 2018 to 794 ATMs in 2019 nationwide. Also the existing estimates showed that less than 40 percent of the NMB Bank Plc customers use ATM machines (NMB annual report, 2019). The ATM technology is less used compared to the other bank services, when compared its uses over the customers' potential in which less than 2 percent of the customers interact ATM (NMB Annual report, 2019). Less attention is paid on the uses of ATM as a result more time and cost incurred by retail customers in service accessibility (Ulaya, 2016). Despite ATM located in various places of commercial banking yet there is a slow adoption of ATM among retail customers of commercial banks in Tanzania. For example, more than 60% of NMB Plc retail customers prefer to receive bank teller services rather than direct self-service interaction through ATM (NMB Annual report, 2019). Once this problem is not properly addressed there is a high possibility of deterioration of bank services and increase in time in reception of bank services. The Paucity of information on the influence of ATM tend to resist its use. This concern raises the need to study on the use of ATM in the customer satisfaction of NMB Bank PLC. Therefore, this study will address this concern through searching the usage of Automated Teller Machine, come up with the usage of Automated Teller Machine on the customer satisfaction of NMB Bank PLC.

Literature Review

Definition of Key Concept

Self-service technologies

SSTs are termed as specific technological interfaces for retail customers' accessibility of direct services without personal contact of banks staffs. The specific ability that replaces face to face interaction with bank staffs. It provide avenue for retail customers accessibility of bank service without direct personal contact(Lee & Lyu, 2019). The bank service provision is aimed to be at better standard in the form of accurate, convenient and less time consumption. In the basis of this study self-service specifically referred to banks services that customers can access without personal contact with bank tellers. One of the specific types of self-services is ATM, which provide interaction with machines to handle bank transaction.

An automated teller machine (ATM)

An automated teller machine (ATM) is defined as an electronic banking machine that allows customer to complete and handle basic transactions without physical contact of bank branch teller. ATM is historically known as automated bank machines (ABM) or cash machines. It was designed to handle transaction as a result of technological development (Kabir & Yusuff). In this study ATM is known as electronic machines that facilitate bank transaction to retail customers without face-to-face contact by the bank teller staffs. This reduced direct physical interaction with bank tellers' staffs, while customers may access bank transaction is a means for self-service.

Retail Customers

Retail customer is recognized as the one who interact on the uses of self service for example ATM provided by the commercial bank. The retail customers recorded to have enough information on the services and benefits accessed in the system. These types of customers tend to select the products or services because of the satisfaction and past experience of the service (Kiragu, 2017). The customers' ability to access bank service in the means of ATM is ground on the basic experience to handle bank transaction. In this study retail customers is defined as one who access bank service through direct banks staffs, and ATM.

Commercial Banks

Commercial bank are type of financial institution that extend financial services direct to customers, are operating through accepting deposits, loans extension and innovation of new products for profit making. It is part of the large bank which operate while attached to the central banks for control and management purpose (Kiragu, 2017). The retail customers have room to deposit checks and start saving for the purpose of loan accessibility. In this study commercial bank is recognized as an agent of self-service technology for example ATM. This has a responsibility to handle and facilitate self-service in a manner acceptable with regulation and retail customers' agreement.

Customer satisfaction

In the marketing world, consumer happiness is becoming increasingly important. It has been viewed as a proxy for corporate success because it is closely related to loyalty and retention. Client satisfaction is increasingly focusing on customer loyalty, which is closely related to commitment in commercial relationships (Hill, Brierley, & MacDougall, 2017). Customers' commitment is not solely determined by their level of satisfaction. Customer satisfaction represents a commitment that is fundamentally linked to the expense of such a commitment.

Theoretical literature Review

The Technology Acceptance Model (TAM)

Technology Acceptance Model used in this study to facilitated Automated Teller Machine acceptance in the Bank Industry is accompanied to the attitude of customers in the commercial banks, which specify the ease of use and its usefulness in the usage of Automated Teller Machine(Wirani, Hidayanto, & Shihab, 2020).

Technology acceptance model was developed by Fred Davis and Richard Bagozzi in 1989 and in 1992. This is originated on the attitude measures with the acceptance of technology specifically in the ease of use and usefulness. This is one of the important theory in the information system dimension. The key variables of this model are Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), this are considerable major factor that influence the decision(Chille, 2018). The perceived usefulness is the degree that customers of NMB believe that using automated teller machine would influence customer satisfaction of NMB

Bank. The perceived ease of use will tend to influence a higher efficacy in the use of Automated Teller Machine, this means that customers of NMB Bank Plc may consider to shape their decision towards the technology acceptance.

It presents knowledge on the users' acceptance and adoption of a new technology. The adoption and use of technology is connected to the change of behavior (Martins, Oliveira, & Popović, 2014). Various factors are linked to the users of ATM as one of the self-service technology. The existence of new technologies is attached to both subjective application and interaction of users. The user's ability to interact with ATM as self-service technologies depend on the role identification of the service, norms, and cognitive process toward the influence of ATM in the customer satisfaction of NMB Plc in Dodoma City. This theory related to this study as it recognizes several facets which are related to self-service provision; acceptance, adoption, knowledge, experience, attitude of retail customers on the service.

Customer Satisfaction and Disconfirmation Theory

Customer satisfaction theory has been conceptualized in the use of Automated Teller Machines self-service. This is perceived ATM use towards addressing the customer expectation or desire. Customer satisfaction is based on the confirmation or disconfirmation of customer expectation and desire (Othman, Hamzah, & Hassan, 2020). Disconfirmation theory posits that Customer satisfaction/dissatisfaction is defined as the gap between the customer satisfaction of services and the customer's cognitive or emotional standards, such as desire and anticipation for the services. If perceived customer satisfaction surpasses or falls short of expectation or desire, there is positive or negative disconfirmation, and the customer is satisfied or unsatisfied (Bansal & Singh, 2018). There is rising evidence on the Desire Disconfirmation (DD) and Expectation Disconfirmation (ED) is the consumer satisfaction based on the perceived services of products that have already been utilized or consumed (Iqbal, Hassan, & Habibah, 2018).

The three major categories of measurement scales exist and are utilized in measuring customer satisfaction. Notable examples are customer satisfaction scales, confirmation scales, and satisfaction scales. Customer satisfaction scales are categorized as poor, fair, good, and exceptional; disconfirmation scales range from worse than predicted to better than expected; and satisfaction scores range from extremely unsatisfied to very satisfied, as well as disconfirmation scales based on disconfirmation theory experience. Oliver in 1980 developed the expectancy disconfirmation theory, which has been validated and indicated that the use of

disconfirmation measures is valuable for three reasons. "First, in a single disconfirmation-based inquiry, the SERVQUAL measurement, the results ranged from far worse than predicted to substantially better than expected (Abdullai & Nyaoga, 2017). Second, it is mathematically demonstrated that a comparison with expectations correlates with customer satisfaction more than either a quality or a satisfaction inquiry. Finally, utilizing a disconfirmation scale is preferable because a customer rating based on the uses of Automated teller machines, such as ease of use or usefulness of the ATM.

Empirical Review

In a study conducted in Nigeria, Okafor and Ezeani (2012) explored the barriers to the adoption of ATM. The findings revealed that ATM are less adopted among the users of commercial banks. This is specifically because of limited information on the functionality and benefits that ATM may provide to users. This is the major barrier for adoption ATMs among the retailer customers. In most instances retail customers of commercial banks tend to prefer from being served rather than self-service, this has originated from the culture dimension. Customers in the retail sector are resistant to the adoption of SSTs due to this culture experience. The study conducted by Nicholaus and Venkatakrishnan (2013) focused on the interaction of self service for money transfer services in Singida Tanzania. The study used cross sectional survey for administering the self-service transaction information collection and study organization. Commercial banks were the main supplier of self-service in relevant network platform. It has a room for retail customers to interact and easy management of bank transaction. The limiting factors in this study were the culture of the users, knowledge and experience that retail customers have. The existence of limiting facet are the major factor that hinder the adoption of self-service.

In Tanzania the research conducted by Kiunsi (2013) who reviewed on the utilization of digital banking in CRDB. The study showed that the uses of automatic teller machine (ATM) are considered to be cost effective and efficiency in such a way that clients of CRDB accepted. The customers firstly appreciated the use of ATM for financial transaction in the electronic due to the nature of item and easy formatting system. The specific function such as highlighted username and password for security concern are easily handled by the users.

The study conducted by Manyeruke (2018) argued that any one provided may manage to use ATM, mobile banks, internet banks and Sim banking may qualify to be retail customers. The application of ATMs among the retail customer is connected to the nature of employment and

activities. The type of employment or job determine the ability to use and interact in the financial transaction. The use of SSTs is related to the customer ability to interact and use even if lack job, but the frequency is limited for jobless retail customers.

According to Adesina and Ayo (2010), the capacity to use certain types of SSTs relate to the ability of users to accept them, and failing to accept them leads to a lot of controversy. This is one of the most significant obstacles to regulating and managing SST transactions. SSTs are defined as services that allow retail customers to acquire services in a timely and autonomous manner without personal contact of bank staffs.

The specific attempt by Viswanadham (2016) who studied the factors that influence the utilization of ATM machines in the bank transaction. It was organized through Interviews and questionnaires to capture both qualitative and quantitative data. The study included 60 participants, and their responses were analyzed using the SPSS computer program. The findings revealed that M-pesa is the most often used SST, according to the survey. The ATMs and mobile banking is less used in the management of transaction.

Methodology

This study was used cross sectional design. The application of cross-sectional design was facilitated information collection in one point in time. With respondents of similar characteristics but different factor of interest.

Population and sampling

This study was conducted at NMB Bank Plc in Dodoma city, because is large commercial banks in Tanzania with 272 branches covering Nationwide (NMB annual report, 2019). NMB already showed about 8% of its customer's increases in every year (Mchomba, 2018). The customers of NMB nationwide are over 4 million (Eckhoff, Kibombo, Natukunda, Pennotti, & Vandergaag, 2019). This is the reputation considered as a factor pushed the researcher to choose this commercial bank in Dodoma, over 76,000 are customers of NMB Bank Plc in Dodoma City, in which three branches composed of Dodoma Branch, Mazengo and Bunge Branches with over 45600 customers of NMB Bank Plc which keep on increasing because of being capital city in Tanzania, Dodoma since host the capital city of Tanzania the population of 2,083,588 as recorded in 2019 (Wiedenmayer, Msamba, Chilunda, Kiologwe, & Seni, 2020). Thus, this population provide a potential justification in the application of ATMs in the relevant transaction for the customer satisfaction of commercial bank. In this study

population was all retail customers of NMB Bank PLC in three branches located in Dodoma city which are Dodoma Branch, Mazengo and Bunge Branches with over 45600 customers of NMB Bank Plc.

The sample size was calculated by Yamane (1967) formula for appropriate sample size and statistical inference. $n = N/(1+N(e)^2)$ Where by n = sample size, N = total population, e = standard error (equal to 10% or 0.1 on 90 % confidence level). Therefore $n = 45600/(1+45600(0.1)^2) = 45600/457 = 99.8 \approx 100$. The systematic sampling was used to select NMB Bank PLC retail customers from the interval of 2 (two) customers who were visiting ATM station. This is because respondents were precisely present in several intervals of time. The researcher was positioned outside the ATM station after being given special permission from management of Dodoma Branch, Mazengo and Bunge Branches. It was interviewer administered questionnaire. This is a questionnaire that was completed in the presence of interviewer, it was provided more chance for interviewer to ask question verbally to the respondents.

Instruments

The survey method provides more opportunity for questions with various option answers. The survey involves asking information from respondents through questionnaire, it is relevant for representative of retail customers and the characteristics on the usage of Automated Teller Machine self-service technology for the customer satisfaction of NMB Bank PLC in Dodoma City. Survey method is key for this study since it helps to collect quantitative information based on the usage of Automated Teller Machine self-service on the customer satisfaction of NMB Bank PLC in Dodoma City. The questionnaires was administered to retail customers of NMB Bank PLC. The purpose is to capture relevant information on the usage of Automated Teller Machine self-service technology for customer satisfaction of NMB Bank PLC in Dodoma City.

Quantitative data were entered in the Statistical Package for Social Science (SPSS) version 21. In examining the usage of Automated Teller Machine self-service technology for customer satisfaction of NMB Bank Plc in Dodoma City descriptive analysis with the use of frequencies and percentage were applied.

Findings and Discussion

The usage of Automated Teller Machine self-service technology for NMB Bank Plc customer satisfactions in Dodoma City

The usage of Automated Teller Machine self-service technology for NMB Bank Plc customer satisfactions in Dodoma City is analysed with the frequency of NMB ATM use, the use of ATM application, and reasons of using ATM.

The frequency of NMB ATM services use

The frequency NMB customers use ATM service is presented in Table 1, whereas it show a large proportion (43%) use NMB ATM service every day compared to (1%) who use ATM twice a month.

Table 1: The frequency of NMB ATM services use

Category	Frequency	Percent
Everyday	43	43.0
Once a week	27	27.0
Twice a week	9	9.0
Once a month	20	20.0
Twice a month	1	1.0
Total	100	100.0

Source: Field data (2022)

The ATM service is applied frequently to carry out diversity of transaction on daily basis on implication that customers don't have budgeting knowledge which leads them to use ATM daily to ensure they meet their social and economic obligations. Kiunsi (2013) supported these findings that utilization of ATM is widely to carryout different transaction which are required for customers' wants and needs. Thus, ATM assist NMB Bank PLC customers to settle short term obligations while they handle money transaction.

The use of ATM application

The findings in Table 2 below showed that majority (85%) of respondents' money withdrawal function of ATM is extremely important, with a high mean score of 4.7900 that

denoted money withdrawal is extremely important. The measure of dispersion around the mean was .53739 indicating the responses were varied. Also, findings in Table 2 presented the ATM function of bills payment, a large proportion (67%) of respondents suggested that bills payment is not important ATM application. The low mean of 2.1600 denote not important and with respective high measure of dispersion of 1.72750.

Moreover, findings in Table 2 below presented the request for bank statement ATM application. A large proportion (90%) of respondents suggested that bank statement request is not important function among the customers of NMB. The low mean score of 1.3600 denote not important and the respective high measure of dispersion of 1.12385.

The findings showed the scores of not important and little important with mean score of 1 to 2.4. Mean score of 2.5 to 3.4 showed the score of important. Mean score of 3.5 to 5.0 showed the score of very important and extremely important respectively.

Table 253: The use of ATM application (n=100).

Statement	Level of important in f (%)					Mean	Std. Deviation
	not important	Little important	Important	Very Important	Extremely important		
Money withdrawal	0(0)	0(0)	6(6)	9(9)	85(85)	4.790	.53739
Money transfer	24(24)	1(1)	0(0)	16(16)	59(59)	3.850	1.67196
Account balance checking	18(18)	1(1)	0(0)	29(29)	52(52)	3.960	1.48338
Payment of bills	67(67)	2(2)	1(1)	8(8)	22(22)	2.160	1.72750
Request for bank statement	90(90)	1(1)		1(1)	8(8)	1.360	1.12385

Money deposit	64(64)	6(6)	1(1)	15(15)	14(14)	2.090	1.58971
Application for ATM card	77(77)	7(7)	1(1)	7(7)	8(8)	1.620	1.28535
Application for cheque book	71(71)	10(10)	0(0)	19(19)	0(0)	1.670	1.17254
Application for SMS alert	83(83)	8(8)	1(1)	8(8)	0(0)	1.340	.85540

These findings imply Customers of NMB withdrawal money through ATM for different purpose including payment of bills on cash basis. Meanwhile, at the same customers to request their bank statements through other means apart from using ATM. Asante, et al. (2019) argued that less than one percent of NMB customers with ATM access use it for bills payment. Similarly, Mwangi (2017) suggested that ATM use in the access of bank statement not emphasized with ATM access customers. Thus, money withdrawal through ATM is conducted to handle different cash needs in the time even non-official hours.

Reasons of using ATM

Researcher enquired on reasons on using the ATM and findings (Table 3 below) show that A large proportion (76%) of respondents suggested that to access bank services even during non-bank official hours is extremely important. A high mean score of 4.7600 denoted extremely important and a respective low measure of dispersion of .42923. Also, findings in Table 3 below present the using of ATM machines is to avoid bank queue. A large proportion (75%) of respondents suggested that the use of ATM to avoid bank queue is extremely important. A high mean score of 4.5400 denote extremely important and a respective low measure of dispersion 1.04852.

Moreover, Findings in Table 3 below present a large proportion (58%) of respondents suggested that the use of ATM to pay bills is not important. A low mean score of 2.2500 denote not important and a respective high measure of dispersion of 1.61667. Also, large

proportion (54%) of respondents suggested that the use of ATM to pay insurance premium is not important. A low mean score of 2.2700 denote not important and a respective high measure of dispersion of 1.59453.

The study findings denoted the scores of not important and little important by a mean score of 1 to 2.4. The score of important was presented by a mean score of 2.5 to 3.4. The score of very important and extremely important represented by a mean score of 3.5 to 5.0.

Table 3: Reasons of using ATM

Statement	Level of important in f (%)					Mea	Std. Deviation
	not important	Little important	Importa nt	Very Importa nt	Extremel y importan t		
To avoid bank queue	7(7)	0(0)	0(0)	18(18)	75(75)	4.5400	1.04852
To avoid carrying cash unnecessarily	7(7)	0(0)	0(0)	20(20)	73(73)	4.5200	1.04910
To access bank services even during non-bank official hours	0(0)	0(0)	0(0)	24(24)	76(76)	4.7600	.42923
To minimize disturbance in accessing bank	0(0)	0(0)	7(7)	29(29)	64(64)	4.5700	.62369

services

To save	0(0)	0(0)	0(0)	63(63)	37(37)	4.3700	.48524

time

To facilitate	0(0)	0(0)	2(2)	57(57)	41(41)	4.3900	.52982

quick bank

transaction

example

cash

withdrawal

To apply for	43(43)	1(1)	7(7)	39(39)	10(10)	2.7200	1.57043

personal

loan

To pay	54(54)	10(10)	8(8)	11(11)	17(17)	2.2700	1.59453

insurance

premium

To transfer	51(51)	6(6)	0(0)	41(41)	2(2)	2.3700	1.48837

cash

To pay bills	58(58)	7(7)	1(1)	20(20)	14(14)	2.2500	1.61667

These findings implies that most of the ATM users have ample time to use ATM after official working hours of the bank so as to avoid bank queue. This is possible since majority of ATM users are employees whom non availability of time to visit ATM during working hours. Not only that but also, due to dominating cash economy of Dodoma customers don't prefer to use ATM to pay bills and insurance premiums. Also, lack of proper knowledge and information and more convenient ways to settle insurance premiums and other bills might push customers not to prefer ATM over other means for settling insurance premiums and other bills.

Similarly, Chile (2018) argued that ATM users use ATM for the purpose of avoiding bank queue. Likewise, Abdullai & Nyaoga (2017) argued that in the use of ATM customers are in a more chance to access bank transaction even during non-bank officials. Similarly, Okafor and Ezeani (2012) argued that adoption of ATM in the payment of insurance premium is less emphasized by the customers of ATM in many commercial banks. In the same way, Nicholaus and Venkatakrishnan (2013) argued that payment of bills through ATM is less emphasized in the commercial banks ATM, in which customers prefer alternative means to conduct bills payment.

Therefore, more than half (76%) in the findings presented pointed out that they use ATM during non-bank service hours which provide a wide range for customers to handle bank transaction. Thus, ATM provide platform for NMB Bank PLC to manage their customers request on services and products remotely however more knowledge and proper information so as to raise awareness to the customers.

Conclusion and recommendation

Conclusion

The study results showed that ATM is applied every day with customers of NMB to handle different functions and transactions. Including transfer ATM application, money transfer, and account checking balance. The usage is driven reasons of avoiding bank queue, carrying cash unnecessarily, minimize disturbance in accessing bank services and saving time especially in cash withdrawal among the customers of NMB Plc Dodoma City. Therefore, it is concluded that ATM is used at large in accomplishing several social and economic activities, thus customers of NMB Bank Plc in Dodoma city are satisfied with ATMs.

Recommendations:

Based on the research findings, the following recommendations were put forward to improve the use of ATM on the satisfaction of NMB customers. The study recommended that the management of NMB Bank PLC has to increase sensitization of usage of ATM functionalities to the customers.

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The Status of Planning in Tanzania Manufacturing SMEs

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Abstract

The present study aimed to examine the planning status of Manufacturing-Small and Medium Enterprises (Ma-SMEs) in the Dodoma Region in Tanzania and turn to contribute to planning-related literature mainly in developing countries. The study employed a cross-section survey design with the agreement of primary data collection via a cross-sectional survey questionnaire followed by a quantitative research approach. The sample of this study was 167 registered Ma-SMEs selected using a random sampling technique. According to the study's findings, the sub-sector consists of Ma-SMEs that are family-owned that have a low level of planning knowledge. Moreover, the Ma-SMEs were found to have little or no practice in the preparation of plans for their success and continuity. Based on the findings of the study, the study recommends the provision of planning education for SME owners on the best planning practices, including succession planning for industrial continuity for future generations. In terms of Ma-SMEs registration, the result recommends that the company's registration law be amended to reflect the presence of family businesses and non-family businesses in Tanzanian private firms. Finally, while Tanzania's SME policy (2003) focuses only on the use of a business plan for Ma-SMEs, this result recommends that the policy be revised to emphasize the use of a succession plan to help future generations succeed as company founders. There is no research without limitations. Ma-SMEs from one region were included in this study. Future research should include additional locations and a larger sample size to cover a larger area of Tanzania to be more certain.

Keywords: Manufacturing, Small and Medium Enterprises (SMEs), Planning, Tanzania

Introduction

In the business world, Small and Medium Enterprises (SMEs) have been recognized by policy-

makers as key drivers of entrepreneurship, job creation, innovation and economic growth (OECD,2018; Cernat et al., 2014). SMEs account for approximately 90 per cent of the company population in industrialized nations, 60-70 per cent of employment, and 55 per cent of GDP, according to the World Trade Organization. The sector can also account for up to 45 per cent of total employment and 33 per cent of GDP in emerging nations (OECD,2017) and become a key source of self-employment as well as regular job opportunities for the local community in many countries around the world (Lubawa,2021; Quarley, 2017; Afande, 2015).

Given the role played by SMEs, they have been widely recognized as the catalyst for sustainable economic development (Osotimehin et al, 2012). In Tanzania, SMEs account for more than 90% with most of them being sole proprietorships or businesses held by individuals who do not have a company registration (Andreoni, 2017). According to the National Bureau of Statistics'(Annual Survey of Industrial Production {ASIP}) (URT, 2018) and the Census of Industrial Production (CIP), Tanzania has 2,462 establishments, with 88.3 per cent (2,173 establishments) being SMEs which account for 47,921 (97.3%) of the 49,243 industries sampled, according to CIP. According to the report, the manufacturing industry employed 264,223 people in 2010, with 125,336 (47.4%) working in small enterprises and 138,887 (52.6%) in large corporations. In this regard, it is apparent that the SME sector is crucial to the development of Tanzania's economy. The SMEs are thus, reflected in the Tanzanian government's plans. For example, Tanzania Development Vision (TDV) 2025 "highlighted the SME sector as a key for the country's long-term development strategies. The goals are to have SMEs contribute to the development of a semi-industrialized country by 2025, with manufacturing contributing a minimum of 40% of GDP to the national economy.

In Tanzania, SMEs account for 95% of the total number of establishments (Andreoni, 2017), where food processing accounts for 24%, textiles for 10%, chemicals 8.5%), and other items such as drinks, leather and leather goods, paper and paper products, publishing, printing, and plastics. The manufacturing sector accounts for 8.5 per cent of GDP (URT, Bank of Tanzania Annual Report 2020/2021). The Ma-SMEs are commonly family-owned and controlled by owners or close family members, providing the majority of the capital (Lubawa,2021). Commercial banks have been lending to SMEs and supporting their growth (URT, Bank of Tanzania Annual Report 2020/2021). A business plan's effectiveness as a management tool for SMEs has been demonstrated, albeit many of them use it when seeking a bank loan or are

required by investors, educators and advisors (Lubawa, 2021; Honig and Karlsson, 2004). Delmar and Shane (2003) suggest that planning improves a business's chances of survival by improving the product creation process as well as the organization of newly established enterprises. One of the objectives of Tanzania's SME policy of 2003 was to promote SME growth through modern business techniques, including using a business plan.

SMEs in Tanzania are self-sufficient by planning their activities like any other business venture and some use planning techniques guided by consultants to achieve their objectives (Lubawa, 2021). They also prepare a succession plan for transferring the business in case the existing generation(founders) dies (Kiwia, Bengesi and Ndyetabula,2019), though lack of confidence, lack of wisdom and communication problems are suggested to be the major factors leading to selecting incompetent successors (Magasi, Tonya and Kapaya,2020). Yet SMEs have also been preparing and using financial reports to make reliable decisions, an act that can be described as SMEs having prior setting plans that depend on the financial ability of the firm (Lubawa,2019). Other uses of financial reports are financial forecasts by looking at the realities of assets and liabilities in response to financial reports (Bull and Crompton, 2006). If this is a general practice for SMEs, it is clear that SMEs are using human and financial resources to implement business activities like any large business venture. It should be mentioned that SMEs have been working on a business strategy to help them meet their obligations (Lubawa,2021). It has been evidenced that the right use of business planning techniques and good alignment strategies have a positive impact on SMEs' development (Sugiarto, 2019), success (Lubawa,2021) and profitability (Ryans, 1997). It has been argued that to continue running businesses in some traditional ways, without a complete plan reduces SMEs from getting financial support thereby slowing down the growth and sustainability of the business (Kesale, 2017).

Despite the success stories of SMEs implementing business plans, there is still a paucity of research on how they employ planning techniques to run their businesses. The Ma-SMEs have developed a habit of planning their business activities, whether formal or informal (Lubawa,2021). Although formal planning is beneficial for SME performance (Mitchelmore and Rowley, 2013; Gică and Ioana, 2012), many SMEs suggested lacking appropriate formal planning techniques (Lubawa,2021; Omboga and Okibo, 2016; Van Tonder, 2010; Stonehouse

and Pemberton, 2002). Yet, nine out of ten small businesses did not have basic planning documents which limit them from accessing financial support and this limits their growth and sustainability (Kesale, 2017; Finscope Survey, 2012). This makes it important to examine the planning status of SMEs.

Good business practices for Ma-SMEs are generally a matter of applying common sense to figure out what works in specific scenarios. Scenario planning, per this study, enables leaders to manage uncertainty and risk while also assisting organizations in understanding the dynamics of the business environment, recognizing new opportunities, evaluating strategic options, and making long-term decisions. Scenarios aren't predictions; they're tools for figuring out what's driving the future (Kourdi, 2009). Ma-SMEs devise strategies for generating revenue, attracting clients, and selling their products. Daily, it enters into a variety of agreements, including credit agreements. The central concept is that human behavioural decisions are the outcome of a rational process in which attitudes, norms, and perceived behaviour control impact behaviour (Smith et al., 2007). Lubawa (2021) has suggested that studies be conducted to determine the planning status of Ma-SMEs to advise on the best way of understanding the planning status of Ma-SMEs for relevant recommendations that will support government intervention programs toward the sector. The impact of these intervention programs on Ma-SMEs' behavioural intention is how to predominantly influence planning behaviour. Thus, what is missing in the existing literature, is the lack of empirical work that examines techniques, tools, and approaches to planning that are developed and used by Ma-SMEs. Understanding the types of planning techniques and making recommendations for improvement helps the Ma-SMEs sector in Tanzania to be strong against competitors from East African Countries. The aim of this study, therefore, is to assess the Status of Planning in Tanzania Manufacturing SMEs.

The findings of the study can enable investors and creditors to carefully plan their investments and lending activities in Ma-SMEs. It also gives information to governmental and business associations to whom they can seek assistance to improve their capabilities. The findings from Tanzania can serve as a useful lesson for other Ma-SMEs in developing economies. The study has been supported by the Theory of Planned Behaviour (TPB) and the Institutional theory. The TPB was used to clarify Ma-SMEs' owners' intention to carry out a planning behaviour whether

formal or informal to achieve their business objectives (Ajzan,1991). The Theory of Planned Behavior is suggested to be a useful tool for describing manufacturing firm planning behaviours (Lubawa, 2021). Furthermore, the study is backed up by the institutional theory, which takes into account all of the enabling factors for SMEs to prosper (Meyer & Rowan, 1977).

Problem Statement and Justification

Manufacturing SMEs are widely acknowledged as proven to be valuable for enhancing the country's economy. Understanding the importance of SMEs, Tanzania's government has created a variety of policy frameworks and strategies to promote the manufacturing sector's growth while also addressing some of the challenges faced by Ma-SMEs. These include, for example; SME Development Policy 2003; National Entrepreneurship Development Fund (NEDF); Blueprint for Regulatory Reforms to Improve Tanzania's Business Environment (2018); National Skills Development Strategy (NSDS) 2016–2021; Integrated Industrial Development Strategy (IIDS) 2011–2025; The Second Five Year Development Plan 2016/17–2020/21 (FYDP II) and the Sustainable Industrial Development Policy 1996-2020 (SIDP). Other interventions aimed at supporting the growth of SMEs in Tanzania included the establishment of an SME credit guarantee scheme managed by the Bank of Tanzania in 2005, the establishment of the Small Industries Development Organization in 1973, the establishment of the Vocational Education Training Authority in 1994, the establishment of the University of Dar es Salaam entrepreneurship centre in 2001, and the establishment of the Mipango Entrepreneurship and Innovation (MEI) Centre of the Institute of Rural Development in 2019, to mention a few.

Despite substantial government efforts to make it smoother for SMEs to succeed in Tanzania, however, there is limited literature on the planning status of manufacturing SMEs in Tanzania. Government efforts alone are not enough. It is good to know the planning techniques of SMEs to improve on their shortcomings. The important questions on planning techniques remained unanswered. This study argues that for a Ma-SME to grow into a large company, it must operate as a modern business using modern planning techniques. Plans are said to deliver tangible benefits to new businesses, such as increased earnings and other competitive advantages, which could lead to a higher likelihood of long-term survivability (Lubawa,2021; Bracker, Keats & Pearson, 1998). The SMEs' growth into large firms is necessary and requires special attention to support their growth and become large firms to increase Tanzania's industrial competitiveness in the world. SMEs, on the other hand, have been experiencing failures, with the primary causes

being management issues such as a lack of strategic thinking and long-term planning (Analoui and Karami, 2003). Good planning is a key to success, and growth and a major contributor to the profitability of a firm (Ryans, 1997; Aram and Cowen, 1990; Hillidge, 1990).

The lack of literature on planning practices might lead to Ma-SMEs' poor growth and failure, and affect Tanzania's industrialization journey, loss of employment, government revenue in terms of taxation and the agricultural sector as well (Bushe, 2019). The manufacturing sector is centred on the processing of agricultural goods, as the country's economy greatly depends on agricultural production (URT, 2008, 2010). Furthermore, the present relationship between Ma-SMEs and institutions forces; such as financial institutions will be affected if reliable planning status information is unavailable. Financial institutions have a considerable impact on the success and performance of SMEs through credit facilitation (Badi & Ishengoma, 2021). Due to a lack of literature, established entrepreneurship centres, such as the University of Dar es Salaam Entrepreneurship Center (UDEC) and the Mipango Entrepreneurship and Innovation (MEI) Centre, will be unable to develop accurate SME support mechanisms and SME training programs to assist SME owners/managers in acquiring the necessary planning skills to properly implement business practices, which could enable SMEs to achieve optimal performance. Using a quantitative research paradigm with a cross-sectional design, this research, therefore, examines and closes the gap by assessing the level of planning in Tanzanian manufacturing SMEs.

Literature review

Empirical literature review

The fundamentals of planning are premised on the basis that planning, helps to increase efficiency and attain a simple goal (Ansoff, 1991). According to planning followers, planning is especially important in a dynamic and unstable environment since it reduces uncertainty, facilitates, and speeds up decision-making, minimises risk perception, increases the venture's success probability and hence supports the firm's performance (Alonso-Vazquez, Pastor-Pérez & Alonso-Castañón, 2018; Sarason and Tegarden, 2003). The positive results of planning practices for SMEs are confirmed by studies by Lubawa (2021), Mazzor *et al.*, (2009); Gruber, (2007); Shane & Delmar, (2004) and Delmar and Shane, (2003). Another perspective is called the learning school, which supports the restructuring approach to strategy development. In this

approach, informal strategies enable prompt responses, especially in turbulent and uncertain circumstances (Mosakowski, 1997, Mintzberg and Waters, 1985). Instead of wasting time predicting the future, management would be better off allocating resources now and acquiring new ones (Honig, 2004). The summarised literature in the fields of SMEs and planning practices is based on the two approaches.

Characteristics of Ma-SMEs

Ma-SMEs are a unique type of firm that has emerged in importance in Tanzania since the establishment of the SME policy in 2003. They are characterized as the engine of national economies' growth (Lubawa,2021); the largest potential for self-employment; new job creators; companies that have a significant impact on national, regional, and local economies; a tool to discourage people from migrating to economically inactive geographic areas; and companies of international significance. Tanzania is predicted to have 2.75 million SME owners who own and manage 3.16 million SMEs, with the sector contributing TZS 6.9 trillion, or nearly 27% of GDP (URT, National Bureau of Statistics, 2016; URT, 2012). Tanzania's SME sector contributes nearly a third of the country's GDP, employs 20% of the workforce, and has the largest employment potential (United Republic of Tanzania [URT], 2003). Given the scarcity of public service jobs, the SME employment opportunities available are important to the economy. In addition, Tanzania Development Vision (TDV) 2025 “highlighted the SME sector as a key for the country's long-term development strategies. It aims to build a strong and competitive economy by cultivating an entrepreneurial mindset through creative and innovative hard work, improving societal learning to develop capabilities that allow individuals and organizations to respond to threats and capitalize on opportunities for wealth creation (United Republic of Tanzania [URT],1999)”.

Therefore, in accelerating and broadening the economic growth base with a dynamic and sustainable growth of the SMEs, the SMEs Development Policy (2003) was established by the Tanzanian government as a strategy to strengthen their growth, address limitations, tap its potential, establish new SMEs, and improve the performance and competitiveness of existing ones (United Republic of Tanzania [URT], 2003). The SME structure in Tanzania includes manufacturing, mining, commerce, and services and they specialize in food processing, textiles, edible oil production, woodworking enterprises, retail shops, and so on. This study's definition of

SMEs is based on Tanzania's 2003 SME policy. The Tanzania SMEs policy (2003) classified SMEs in terms of the number of employees and capital size as shown in Table 1 below.

Table 1: Tanzanian Government Business Size Categories

Type of Business	Employees	Capital Investment (TZS)	Turnover (TZS)
Micro-Businesses	1 – 4	Up to 5 Million	12,000,000
Small Businesses	5 – 49	5,000,000-200,000,000	150,000,000
Medium-sized Businesses	50 – 99	200,000,001-800,000,000	300,000,000
Large Businesses	100+	>800,000,000	300,000,000

Ma-SMEs sector in Tanzania is characterized by oversimplified consumer product creation, low productivity, and low innovation and creativity (Lubawa,2021; Msami and Wangwe,2016; Nandonde et al., 2015) and a lack of entrepreneurial culture (Mashenene & Rumanyika, 2014). These problems can be solved by emphasizing the effective application of planning techniques, tools, and procedures. Planning has been linked to infrastructure investment, employee numbers, new product development, and annual sales success (Mitchelmore & Rowley, 2013).

Concept of planning

Delmar and Shane (2003) defined planning as the process of balancing resources between demand and supply, transforming goals into operational processes, and formulating expected outcomes. According to Fry (2003), planning is an intentional, systematic activity that provides a path for an organization to achieve its vision and goals. After setting the targets, the goals that are most valuable to the firm are planned to be achieved (Merchant & Van der Stede, 2007). Strategic thinking, in which a hazily stated vision of direction is provided, can help to achieve these objectives (Mintzberg, 1994). It is essentially the practice of planning — the adjusting of relationships between objects ahead of events that influence them. Every facet of an organization's structure, objectives, production, marketing, technology, finance, and organizational management must be planned. All of these activities carry a degree of risk and demand some amount of planning. For this study, planning at the Ma-SME level involves all the possibilities of uncertain outcomes and the point of getting there with existing staffing and other resources. In its simplest form, the purpose of planning is to establish how to get out of where the Ma-SME is today to where it wants to be tomorrow whether guided by a vision or not. It is a

roadmap and guideline for Ma-SME planned actions.

According to Duncan (1990) and Lombardi (1994), planning can greatly contribute to good strategic decision-making, resource allocation, and the firm's long-term organizational prosperity. Planning assists SMEs in making resource decisions between demand and supply, translating goals into operational actions, and formulating expected results (Delmar & Shane, 2003). This can be made possible when it is accompanied by proper record-keeping and a predictable environment.

Written plans

A Swahili proverb is saying... “mali bila daftari hupotea bila habari”. In English translation, we can say ... " Possessions without a [account] book is lost without noticing”. This proverb suggests that it is helpful to keep records of your items in a safe and orderly manner or to organize your work more clearly so that you can know and readily identify the right plan of action for your company. This phrase encourages the writing of plans to keep track of business transactions. According to different research, having a written plan increases the likelihood of firm survival (Gruber, 2007; Shane & Delmar, 2004). Mazzor et al., (2009) concluded that companies with formal written business plans were more likely to support network partnerships, formal quality assurance, and the ability to lead change among employees and that there was a link between average annual sales and owner's managers' vision.

In industrialized countries, however, plans are more formal (written plans) and are frequently only offered on an ad hoc basis, and planning instruments are usually developed instinctively by a small group of people (Brinkmann, 2002). Plans can be written down in a little notebook to keep track of how to carry out a project. A big part of their plans are intuitive plans, and some use unstructured plans (Lubawa, 2021). Bracker and Pearson (1986) separated structured plans into strategic (long-range plans) and operational plans (short-range plans). Other scholars have found that planning works best in large corporations and has minimal impact on SMEs' performance (Robinson and Pearce, 1984). Contrary to prior and contradicting empirical evidence to support the benefits of SME planning, this study argues that plans focused on SMEs will result in their growth, profitability, and sustainability.

It has been argued that in a strong and competitive environment, such as that seen in a globalized economy, manufacturing companies must delight their customers and advertisers by maintaining

a high level of performance (Neely et al., 1995). The data needed to plan, control, and act are provided through performance measurement (Singh et al., 2010). Written plans, as a result, will provide reliable data. Ma-SMEs, according to this research, need to use written plans as operational tools for sustainable performance.

Types of objectives among SMEs

The planning process can quickly devolve into a waste of time if there are no defined objectives put in place. As a result, SMEs have been planning in several ways as a means of coping with market dynamism. A market is said to be dynamic if it has a high rate of entry and exit, rivalry, and fluctuating price that determines product demand and supply (Wang and Ahmed, 2007; Rumelt and Lamb, 1997). Some of the objectives that SMEs have been planning to achieve their survival are on; budgeting, marketing, management, sales and earnings, cashflow, expenditures, new products, recruitment of human resources, return on investment, investment in infrastructure, capital growth, strategic plans, entry into new markets, financial planning, and business expansion (Lubawa,2021; Ariyo et al., 2020; Mitchelmore & Rowley, 2013; Gică and Ioana,2012; Ibrahim, Angelidis & Parsa, 2004). Although SMEs' plans may differ from those of large corporations, scholars assert that SMEs' objectives enable them to move forward strategically by providing benchmarks for assessing progress (Lubawa,2021; Richards, 1986).

Financial Planning

Financial planning is an important part of a company's financial management strategy for reaching financial and overall performance expectations (Mohd et al., 2010). It describes how a company develops its operations based on cash flow or revenues by aligning departmental projections and expenditures to the organization's activities to maintain an adequate financial balance in an organization (Eadie, 2000). Financial planning also facilitates the preparation of the company's annual financial statements (Sivakumar, 2015). It is also suggested by Pandey (2005) that financial planning practices enhance the assessment of the present company's financial position, and the financial resources it needs and consider alternative financing options predict and forecast its growth plans and future financial prospects. Furthermore, Ariyo et al., (2020) affirmed that financial planning is positively related to the risk management, cash budgeting, cash control and financial performance of small-scale business firms. Generally, the planning practices in SMEs are found to have relations with the annual sales, cash flow, new

product development and expenditure (Mitchelmore & Rowley, 2013). The need for financial planning stems from the improper handling of the routine by-businesses with many risks and uncertainty that have flooded the entire business environment (Sivakumar, 2015). Although SMEs are widely regarded as one of the most important sources of economic growth, it has been discovered that inadequate financial planning has resulted in their failure (Omboga and Okibo, 2016; Van Tonder, 2010; Analoui and Karami, 2003). There is a need of understanding the financial planning status of Ma-SMEs and suggest the best ways of improving.

Ma-SMEs and external consultants

Ma-SMEs have continued to operate despite some obstacles, including a lack of core expertise, and knowledge, poor resources, the reluctance of entrepreneurs to share their business information with people outside the company and insufficient information to make an informed choice. Bennett (2008) and Chrisman and McMullan, (2004) claim that because of their small size and lack of market power, owner-managers suffer from inaccurate information, which limits their understanding of the supply of external support. Gică and Ioana, (2012) indicate that poor financial resources and the reluctance of entrepreneurs to share their business information with people outside the company also affect the SMEs to seek external advice from professionals. To overcome their deficiencies, Ma-SMEs must collaborate with external partners to compensate for those flaws, which necessitate the assistance of experts (Carey & Tanewski, 2016; Carey, 2015). External consultants could play an important role in assisting Ma-SMEs with growth plans, management innovations, and organizational change (Wright et al., 2012; Damanpour & Aravind, 2012). External sources of advice have been shown by several researchers to improve strategic knowledge, resulting in competitive advantages and enhanced business potential (Teece et al., 1997). External assistance, according to Srinivasan (2014), encompasses all types of services (such as knowledge offering, sharing expertise and competencies) offered by actors outside the firm that the company cannot get through its resources. Wright et al. (2012) also stated that consultants can act as "regulators or controllers" in addition to being advisors and facilitators. For this study, external support providers are defined as all public or private actors capable of delivering knowledge that is not available at a firm's internal level and is offered as a commercial service (Curran, 2000; Gibb, 2000).

Despite its importance, taking advice is contingent on several factors, including their confidence in their ability to interact with advisers and the advice (Anyadike-Danes et al, 2011; Scott and

Irwin, 2009) and owner-trust managers in the consultant (Kautonen et al., 2010; Johnson et al., 2007). External consultants, on the other hand, are expensive, and Ma-SMEs frequently avoid hiring them. According to Lubawa (2021), the fees paid to a consultant to design the plan could be utilized to fund other initiatives that have a more immediate impact on the firm. The expense of planning, according to the author, is "opportunity costs." The charges are determined by the amount of time spent preparing or reviewing the existing plan. According to Chwolka and Raith (2012), time spent drafting a business plan is partially lost to the company.

This study argues that the engagement of external consultants, whether informal or formal, can help Ma-SMEs achieve long-term growth, competitiveness, and performance. Free advice from friends, family, and business partners, as well as business advice networks, is one example of informal support, while formal support, according to the literature, encompasses paid industry consultants and professional groups, as well as government-sponsored business support organizations (Heyden et al., 2013; Vissa and Chacar, 2009).

Theoretical Review

Theory of Planned Behaviour and SMEs

Planned Behaviour Theory (PBT) (Ajzen, 1985, 1991), which is an extension of the Theory of Reasoned Action, guided the study (TRA). According to this theory (PBT), a person's willingness to execute a certain action, such as business planning, indicates his readiness and creates a commitment to make that action a habit (Ajzen, 2011). TPB works on the assumption that intention is a key predictor of behaviour, and that intention is a work of behavioural belief that links certain behaviours to specific outcomes. Ajzen (2011) describes intention as "a person's willingness to engage in a specific behaviour." In other words, intention refers to a person's conscious plan to exert effort to do a particular behaviour. From the entrepreneurship perspective, Thompson (2009) defines intention as "a person's admitted conviction that they aim to start a new company endeavour and intentionally plan to do so in the future."

TPB has been utilized in certain corporate planning research (Lubawa, 2021) to describe how individual planning judgments can become firm planning decisions. The theory of planned behaviour is utilized in the world of business to explain why people plan and manage businesses (Rueda et al., 2015). Furthermore, the TPB's predictive validity in the context of the firm start-up is broadly in line with results from other domains including medium-term plans that take significant effort to achieve, such as health-related goals (Sheeran, 2002; Armitage and Conner,

2001). Individual willingness to engage in such behaviour (Ajzen & Fishbein, 1980; Ajzen, 1987) determines the likelihood of the behaviour occurring, whereas individual views determine the altitude (Krueger & Carsrud, 1993). As a result, it is expected that the owners of private companies, such as Ma-SMEs, will design and monitor the implementation. According to Lubawa (2021), regardless of whether the plans are documented or not, private business owners are usually the planners and managers of all plans. As a result, owners have developed a planning habit that employees have inherited during execution. The possibility of a positive outcome increases if guidelines are provided to direct where and when planning activities should be performed (Orbell et al.,1997). The TPB summarized the model formulated by (Ajzen, 1991) and presented in Figure 1.

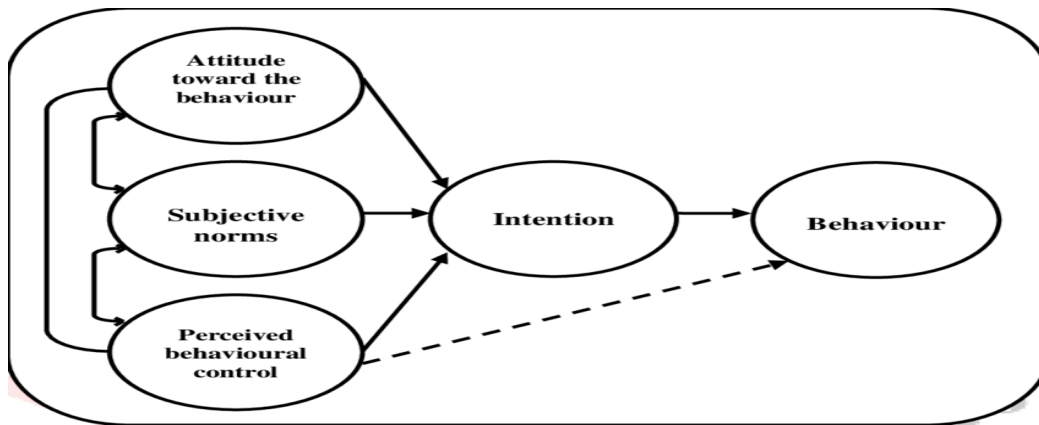


Figure 1. Source: Ajzen (1991): Theory of planned behaviour

The Institutional theory

Before launching a firm, best practices show that entrepreneurs should prepare a business plan. According to surveys, however, not every enterprise uses a business plan. It has been avoided by some (Karlsson and Honig, 2009; Perry,2001). The business environment is shaped by institutional forces that cause businesses to act, develop and operate in similar ways. Institutional sources are suggested as a means to shape how businesses develop (Honig and Karlsson,2004; Karnoe, 1995). According to institutional theory, institutionalization is a social process in which structures, policies, and programs become "accepted as is" (Meyer & Rowan, 1977). In this study, we use an institutional approach and propose that Ma-SMEs produce a plan to achieve

legitimacy from external stakeholders (Institutional sources) (Figure 2). Banking institutions (like NMB Plc and CRDP Plc), educational system (e.g. Mzumbe University, University of Dar-es-Salaam, and the Institute of Rural Development Planning in Dodoma), consultancies, venture capitalists, and government agencies are among the stakeholders (e.g. SIDO, TRA, TBS). These are some of the Institutional sources in Tanzania that are promoting Ma-SMEs to write plans (such as business plans).

Despite Tanzania's institutional forces, business writing often is legal and is not a necessary condition for starting up a business. However, Ma-SMEs owners responded to external needs by drafting their planning as a symbol of taking action to achieve legitimacy for their actions to be accepted by diverse institutional forces. However, it revealed that once Ma-SMEs have established their plans and reached an agreement with stakeholders, they cease updating them, resulting in discrepancies in goals and actual outcomes (Lubawa,2021). It is simpler for a large corporation to afford an institutional forces environment; nevertheless, it might be challenging for a small organization to adapt to this setting. Because Ma-SMEs operate in the same environment as major corporations, the study predicts that planning in SMEs will be influenced by institutional pressures as well.

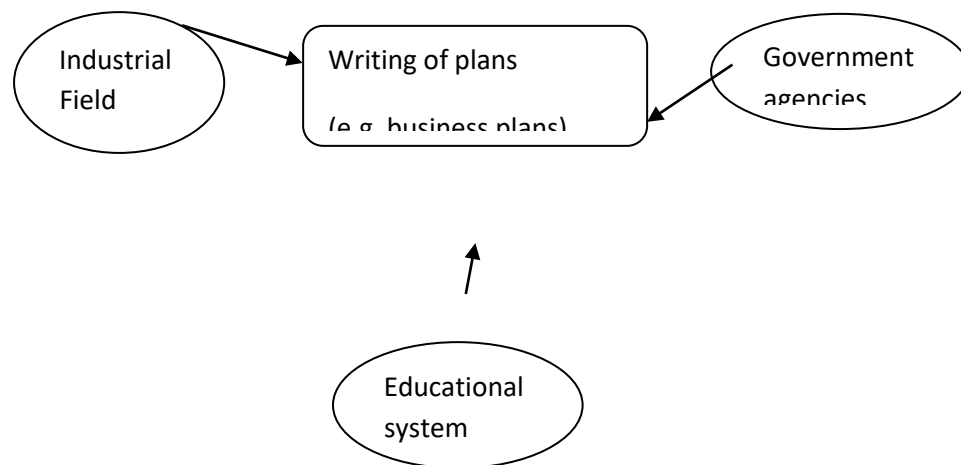


Figure 2. Institutional sources and planning behaviour.

Research questions corresponding to Research Design

In this study, we examine whether or not Ma SMEs engage in short- or long-term plans, and

whether the planning is formalized. Moreover, we examine the types of objectives used by Tanzanian manufacturing SMEs and whether there were internal and external factors serving as inputs to long-term plans. How does Ma SMEs plan to achieve growth and expansion goals? What are the models used by manufacturing SMEs? Whether consultants were used in developing plans for manufacturing SMEs? These were some of the questions in the study. We also determine the factors affecting the planning practices in manufacturing SMEs. Since this study was a cross-sectional exploratory kind of research design, we needed to see the insights on various factors in the small and medium enterprises that are essentially manufacturing and havoc surrounding their practice. These questions helped not in absolute terms but rather assist in collecting information on the planning status of the SMEs in the country.

For various reasons planning is categorised into three, short term, medium term and long-term planning. Any manufacturing intending to grow must feature the image of twenty or fifty years later, will it look like a cat, a small lion, or a big lion in the jungle of enterprises? Also, lack of formalization has stumbled SMEs to acquire financial assistance from MFIs supporting businesses and any support from the government that prepares to enable the environment for their business operations. So, such questions need to be asked to gather enough information for inferences. Writing plans is a tedious job and requires an enormous amount of time and skills, which not all Ma SMEs owners are equipped with, thereby running an enterprise with no plans and if there is one, it is not well prepared. Knowledge and skills in planning were necessary and it is determined to see whether the plans are prepared by owners or by consultations from outside firms taking into account the importance of planning in running businesses.

Method

Research Approach and Design

This study used a cross-section survey because it enables the collection of a large amount of data in a relatively short time (Creswell & Creswell, 2017). Ma-SME 167 were visited under a one-stop-visit to assure objectivity and minimize the possibility of modification of planning information by Ma-SMEs. According to the census conducted in 2012, the number of SMEs in Tanzania was 4,364(URT, 2012), which forms the Ma-SMEs population of the study. The selected Ma-SMEs owners' or managers were surveyed with a questionnaire for primary data collection. Industry owners or managers are involved in completing the questionnaire because

they have experience organizing organizational operations and because they are the ones who make the planning decisions (Lubawa,2021). The study sample size was estimated using the following formula for finite population(Morris and Guenther, 1973; Green, 1982, Krejcie & Morgan, 1970);

$$n = \frac{Nz^2pq}{(E^2(N-1)+z^2pq)} \dots\dots\dots(1)$$

Where: n is the minimum sample size, N is the population size, z is the confidence interval (1.96) for a 95% confidence interval (CI), p = 1-q with q and p set to 0.5 to yield the most conservative outcome possible, and E is the accuracy of the sample proportion, preferably minus or plus 5%. Therefore, from the study population, the sample will be $n = (4,364) (1.962) (0.5) (0.5) / [(0.052) (4,364-1) + (1.962) (0.5) (0.5)] = 167$ Ma-SMEs. Collected quantitative data was analyzed using descriptive statistics and IBM SPSS, version 20 for Pearson Chi-Square, while the qualitative data were analysed through content analysis (Tundui, 2012). They fulfilled all the ethical requirements as per the Institute of Rural Development Planning (IRDP). The study was also permitted by the Government by a letter from the Dodoma Regional Commissioner's office as well as consent from Ma-SMEs owners.

Participant (Subject) Characteristics/ Unit of analysis

The units of analysis were the Ma-SMEs owners. If the owner is not present, then his or her close assistant will be responsible for completing the questionnaire. Ma-SMEs have been identified by getting a list of licensed firms for the year 2019 from each district council's trade department. The list provides the firm's location, including the contacts of the owner. The owners' mobile phone numbers were used to schedule a meeting with them and to approve the data collection request. Managing directors, directors/executives, senior managers, and managers of Ma-SMEs in the Dodoma region were among the participants in the study

Sampling Procedures

According to the census conducted in 2012, the number of SMEs in Tanzania was 4,364(URT, 2012), which forms the Ma-SMEs population of the study. The selected Ma-SMEs owners' or managers were surveyed with a questionnaire for primary data collection. Industry owners or managers are involved in completing the questionnaire because they have experience organizing

organizational operations and because they are the ones who make the planning decisions (Lubawa,2021) as cited by Lubawa et al., (2022).

Sample Size, Power, and Precision

The study sample size was estimated using the following formula for finite population(Morris and Guenther, 1973; Green, 1982, Krejcie & Morgan, 1970);

$$n = \frac{Nz^2pq}{(E^2(N-1)+z^2pq)}$$

$n = (4,364) (1.962) (0.5) (0.5) / [(0.052) (4,364-1) + (1.962) (0.5) (0.5)] = 167$ Manufacturing SMEs

Where: n is the minimum sample size, N is the population size, z is the confidence interval (1.96) for a 95% confidence interval (CI), $p = 1-q$ with q and p set to 0.5 to yield the most conservative outcome possible, and E is the accuracy of the sample proportion, preferably minus or plus 5%. If we fix those figures into the formula, we find the sample size used in our study to be 167 Ma SMEs for the selected areas in the Dodoma region which account for 3.83% of the total SMEs in the country. The research was carried out in the study area, covering Chamwino, Chemba, Dodoma City, Kondoa Town, Kongwa and Mpwapwa districts.

Measures and Covariates

Data Collection Methods

Documentary (e.g. written plans) and self-administered structured questionnaires were used to obtain data. Questionnaires have the advantage of being overseen in face-to-face interviews or, in certain situations, over the phone (Polit and Beck, 2006). These data-collection sources were employed in the study to reconcile what entrepreneurs said about planning with what data analysis revealed. An open-ended questionnaire contains questions that allow respondents to explain their responses (Creswell & Creswell, 2017). Using more than one data-gathering instrument, according to Patton (2002), strengthens and adds credibility to the study. The employment of many data-gathering instruments offers a complete picture of the subject under investigation. Studies that use only one data-gathering method are prone to errors associated with that method. Before the primary fieldwork, the questionnaire was pre-tested to improve the

instrument. Ma-SMEs in the municipality were interviewed as part of the pre-testing. Before beginning the data collection process, all necessary changes to the questionnaire were done following the pre-testing.

Research Design

The study used a cross-sectional exploratory research design because it allows the collection of large amounts of data in a limited amount of time and studies a problem which is not clearly defined to have a good understanding of the existing problem. Such research design needed to be used to answer the question such as how, why and what for the study. The subject of study, that is the manufacturing SMEs were studied naturally without manipulation and no condition was applied to respondents. The study uses quantitative approaches where the Statistical Package for Social Sciences version 20 IBM software program (SPSS), and Microsoft Excel were used for quantitative data analysis to achieve the stated objectives. In the Statistical Package for Social Science (SPSS) software, descriptive statistics, chi-square, and correlation analysis were used to analyse the data. The SPSS, (IBM v.20) is commonly and widely used by researchers in data analysis (Seema, 2020; Razzak & Jassem, 2019). In the first phase, data were collected and entered into SPSS (IBM v.20) for data preparation (for example, verifying and managing missing data), descriptive analysis (for example, generating demographic characteristics of the respondents, computing frequencies, sorting of the firm's financial performance based on its size (medium or large), and means and standard deviations of the data against each variable in the sample. Inferential statistics such as the chi-square have also benefited from this procedure.

Results

Recruitment

In this study, managing directors, directors/executives, senior managers, and managers of Ma-SMEs in the Dodoma region were among the participants in the study. The researchers and three researcher assistants distributed 167 copies of questionnaires to 167 top officials of Ma-SMEs in the Dodoma region. All 167 questionnaires (100%) were completed and returned satisfactorily. This was made possible by physically visiting the factory and insisting that a questionnaire be completed to complete the study.

Statistics and Data Analysis

Table 1 shows the positions of those who took part in the survey. The survey inquired about the respondent's current working titles to ascertain if they are a member of the Top Management Team (TMT). The findings show that the respondents are senior executives in firms, with 125 (74.9%) holding the position of Managing director, 36(21.6%) were Senior managers,4(2.4%) holding the position of manager, while few of them were Director/Executive,2(1.2%). For their roles as senior executives, it is assumed that they have clear and relevant information on planning practices to be shared in this study.

Table 1: Respondents' positions in the Ma-SME

Job title	Frequency	Valid Percent
Director/Owners	125	74.9
CEOs	2	1.2
Directors	36	21.6
Managers	4	2.4
Total	167	100.0

Analysis of data and the reporting of the results of those analyses are fundamental aspects of the conduct of research. Accurate, unbiased, complete, and insightful reporting of the analytic treatment of data (be it quantitative or qualitative) must be a component of all research reports. Researchers in the field of psychology use numerous approaches to the analysis of data, and no one approach is uniformly preferred as long as the method is appropriate to the research questions being asked and the nature of the data collected. The methods used must support their analytic burdens, including robustness to violations of the assumptions that underlie them, and they must provide clear, unequivocal insights into the data.

Ownership Status

In terms of ownership, the statistics demonstrate that in the study area, single-family businesses hold 157(94%) of Ma-SMEs. Other Ma-SMEs, held by a mix of members through friendship associations, are owned to a lesser extent (6 per cent) (Table 2). As a result, it's not surprising that an overwhelming majority of Ma-SMEs (85 per cent) lack long-term written plans that serve as the primary guide for where the firm will go in the following years. Depending on the

situation, they usually have short-term or temporary plans. According to Lubawa (2021), in family businesses, planning is often handled by the owner or family members rather than by employees. According to Gallo and Sveen (1991), a family firm is defined by its members' participation in management as well as their significant position as decision-makers. Non-family Ma-SMEs have a collective guide that is not related to the individual families of the business partners. In these firms, employees collectively discuss their plans and keep track of planning decisions, implementation and shortcomings.

Table 2: Ownership Status

Ownership	Frequency	Per cent
Non-family	10	6.0
Family	157	94.0
Total	167	100.0

Registration Status

It was noted that 7(4 %) of all firms were registered with the BRELA, 88(53%) with SIDO and 72(43%) with Local Government Authority-LGA (District/City Councils) (Table 3). The registration gives the impression that they are known, and pay taxes and other levies. Per this understanding, Ma-SMEs carry out their business formally and legally. Thus, the Governments and other stakeholders have the opportunity to look at a mechanism to help Ma-SMEs' planning education to improve their planning capacity to catch up with global change. The capacity that may facilitate their growth commercially and become large firms.

Table 3: Registration Status

Registering Authority	Frequency	Valid Percent
BRELA	7	4.2
SIDO	88	52.7
LGA	72	43.1
Total	167	100.0

Education Status of Ma-SMEs Owners

The findings also revealed that the majority of Ma-SMEs have a low level of education, either primary (31%) or secondary (29%) schooling, with only 2% having no formal education (Table 2). To put it another way, 60% of them had not completed a college/university degree, which would have exposed them to more relevant skills and information than primary or secondary school, which is too broad.

However, the study discovered that about 38% of those respondents had completed college or University. This is noteworthy since it was previously assumed that those with a formal education would seek employment rather than engage in small-scale manufacturing. According to Storey (1994), the level of education provides a great deal of confidence in dealing with business issues in general such as financial planning issues and its sources as commercial banks. It is the expectation of the study that higher education managers help them in combating the business environment than those with lower education. The study by Timothy (2022) reveals that SME managers in Tanzania with higher education have more possibilities to focus on non-technological innovation than their less educated counterparts. Overall, the Ma-SMEs sector employs managers with various levels of education. The findings are in line with Lubawa and Van Auken's (2019) research, which found that persons with both high and low levels of education participate in this small-scale manufacturing sub-sector.

Table 4: Education Status of Ma-SMEs Owners

Category	Frequency	Percentage
No formal education	3	2
Primary education	52	31
Secondary education	49	29
College/University	63	38
Total	167	100

Company Age

Table 5 indicates the trading company's age in the years since it was founded. The number of years in a business increases the number of reputations, experience and knowledge of employees (Welmilla et al., 2011). The results indicate that the Ma-SMEs age of business operations was

between 1 to 5 years, 88 (53%), 6 to 10 years, 68(41%) and more than ten years, 13(6%). This confirms that the companies have considerable experience to participate in the study. It also indicates that the establishment of new Ma-SMEs is still sustainable in Tanzania since the country introduced the SME policy in 2003, following the liberalization of the country's planned economy to a market economy, encouraging more active participation of the SME sector to accelerate economic growth. Yet there are reasons to assume that Ma-SMEs show planning intensity practices despite different ages and still can go on with operations despite encountering planning challenges, especially long-term planning.

Table 5: Age of the Ma-SMEs

Category	Frequency	Percentage
1 – 5 years	88	53
6 – 10 years	68	41
More than 10 years	13	6
Total	167	100

Planning timeframe

The respondents were asked to rate the extent to which their company engaged in the aforementioned planning schedule on a five-point scale. This scale read as follows: Always (5), Often (4), periodically (3), Seldom (2), and Never (1). Mean values were compared for two planning variables (short-range planning [SR_PLAN] vs mid-range planning (MR_PLAN) with a sample size of 167. The mean was higher for variable SR_PLAN (M=3.91, SD=0.924) than for variable MR_PLAN (M=2.67, SD=0.978). A paired t-test using SPSS indicates that the difference in means (difference = 1.24) was statistically significant, $t(166) = 11.907$, $p=.000$. The results suggest that short-range planning was significantly more practiced by Ma-SMEs than medium-range planning. Further analysis found that, the mean values for two planning variables SR_PLAN vs LR-range planning (LR_PLAN) with a sample size of 167. The mean was higher for variable SR_PLAN (M=3.91, SD=0.924) than for variable MR_PLAN (M=3.66, SD=1.117). A paired t-test using SPSS indicates that the difference in means (difference = 0.25) was statistically insignificant, $t(166) = 2.094$, $p>0.05$. The results suggest no significant difference in

the practices of short-range planning and long-range planning for Ma-SMEs. The conclusion is that there is no difference between short and long-term planning for Ma-SMEs.

Table 7: Paired Samples Test results for Planning schedule

Paired Samples		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Short-range planning (SR_PLAN) - Mid-range planning (MR-PLAN)	1.240	1.345	.104	1.034	1.445	11.907	166	.000
Pair 2	Short-range planning (SR_PLAN) - Long-range planning (LR-PLAN)	.246	1.515	.117	.014	.477	2.094	166	.038
Pair 3	Mid-range planning (MR_PLAN) - Long-range planning (LR_PLAN)	-.994	1.570	.121	-1.234	-.754	-8.184	166	.000

Further analysis also for Mean values was compared for two planning variables (short-range planning [MR_PLAN] vs mid-range planning (LR_PLAN) with a sample size of 167. The mean

was higher for variable LR_PLAN (M=3.66, SD=1.117) than for variable MR_PLAN (M=2.67, SD=0.978). A paired t-test using SPSS indicates that the difference in means (difference = 1.24) was statistically insignificant, $t(166) = -8.184$, $p=0.05$. The results suggest significant differences in the practices of mid-range planning and long-range planning for Ma-SMEs. The results suggest that long-range planning was significantly more practised by Ma-SMEs than medium-range planning.

In conclusion, there were significant differences in the timeframe for planning. Short-term plans have been used more frequently by Ma-SMEs than other alternatives. This is expected because SMEs are relying heavily on short-term financing strategies (hereinafter referred to as working capital management [WCM]) (Yazdanfar & Öhman, 2016; Javid, 2014) to prosper and survive. WCM assesses a company's short-term financial health by examining the mix of short-term assets and liabilities kept on a day-to-day planning basis. WCM aims to solve the problem of how much short-term assets like inventory, receivables, and cash, as well as short-term commitments like account payables, a company should keep at any one time to optimize profits. To put it another way, most small businesses do not have long-term plans. This poses a threat to Tanzanian Ma-SMEs' survival. Ma-SMEs only exist for today; they have no idea where they will be tomorrow.

Planning Objectives practised by Ma-SMEs

The study used a 5-point Likert scale ranging from 1 (never planned) to 5 (often planned) to identify the seven planning objectives (practices over the previous five years). The mean values for how often the objectives were planned are shown in Table 8. The higher the mean, the more frequently the goal was planned. The findings found that the most popular planning objectives were sales planning (Mean=3.96), business expansion (Mean=3.93), and capital growth (Mean=3.77). Table 8 lists the remaining objectives. These findings also reveal that Ma-SMEs plan for multiple objectives. This is consistent with past findings on SMEs in a variety of industries, which found that most companies strive for a variety of objectives (Gică and Ioana, 2012; Ibrahim et al., 2004; Rue & Ibrahim, 1996). Although many objectives are informally documented, this study recommends that they should be formally and professionally written down since they serve as a framework for managerial commitment in obtaining desired results, as well as a track for progress and performance (Lubawa, 2021; Thompson and Strickland, 2003). Effective management strategies must be backed up by well-chosen objectives. Ma-SMEs'

management might get fragmented without proper planning.

Table 8: Planning Objectives stipulated by Ma-SMEs (N=167)

Objective	Mean	Std. Deviation
Sales	3.96	.525
Purchases	2.84	.671
Earnings	3.34	.673
Return on Investment	3.68	.670
Capital Growth	3.77	.537
Market Share	3.32	.704
Business Expansion	3.93	.555

Ma-SMEs use financial reports to plan.

The study also applied a 5-point Likert scale ranging from 1(Never use) to 5(Frequency use) composed of four items (financial statements) to determine which financial reports were most commonly used concerning financial planning, which also supported the planning objectives. Table 9 present the mean values for how often the financial statement was used to support financial planning. The higher the mean, the more often the financial statement were used. The analysis revealed that Sales forecasting (Mean=3.67), cash flow analysis (Mean=3.62) and statement of income (Mean=3.50) were the most used statements by Ma-SMEs. This paints a picture that the Ma-SMEs sector in Tanzania has understood the importance of both preparing and using financial reports for planning. The findings support the usage of financial statements by SMEs in Tanzania, and are consistent with prior research by Lubawa and Van Auken (2019); Lubawa & Louangrath, (2016); Lubawa and Chalu (2015). Given financial planning is at the heart of any business's success, Ma-SMEs should know how to prepare financial reports and how to use them to plan financial planning. Ma-SMEs can leverage financial planning to plan production costs, expenditures, cash flow, and sales forecasting. Financial data that is accurate and timely aids in making effective company decisions and promotes consistency and reliability in estimating the consequences of changing circumstances (Van Auken, 2005).

Table 9: Financial Statements used in Planning by Ma-SMEs (N=167)

Financial Statement	Mean	Std. Deviation
Sales forecasting	3.67	.681
Statement of Financial Position	2.53	.943
Statement of Income	3.50	.657
Cash flow Analysis	3.62	.599

The further discussion went on to look at key indicators that help Ma-SMEs plan and implement their financial strategies. They have an average of 1.20 for the three metrics (Table 10) that are relevant to this sector. This score is insufficient to overcome the Ma-SMEs' strategic planning and control inadequacies (Francés, 2001). Manufacturers should have a dependable financial control function that aims for profitability, growth, and survival in a dynamic business environment (Ibrahim & Mustapha, 2019). However, the biggest challenge for Ma-SME is predicting sales using other economic factors such as inflation.

Table 10: Financial Planning and other Dimensions (N=167)

Dimensions	Score
Functional analysis of the production planning	1.35
Presence of strategic planning	1.24
Existence of financial control mechanism	1.05
Average score	1.20

Source: Computed by the authors based on the questionnaire applied

Consultants to assist in planning

The study also sought to determine whether consultants were hired to assist the planning matters. The study applied a 5-point Likert scale ranging from 1(Never hire) to 5(Frequency hire) composed of three types of consultants and the weighting importance for selection. Table 11 shows computed sets of numerical weights and reasons for consulting services, which were sorted in ascending order. The service with the largest weight was the most desired in assisting with the planning. The mid-point of the importance weight was 0.3333, which was used to find the most criteria, which were the final criteria utilized to choose a consulting service. It was found that the free-lance individual consultant (Weighted Mean=0.5058) was preferred mostly,

followed by academic institutions (e.g. Universities or higher learning institutions, Weighted mean=0.2784). Private consulting firms were employed less frequently (Weighted Mean=0.2157). The consultants, whether they be individuals, firms, or universities, can only help with good planning; nevertheless, the ultimate responsibility for the plan and its implementation rests with the business owners. (Bracker and Pearson, 1985; Lubawa, 2021). Overall, the findings are evident in the Tanzanian SMEs' use of external consultants to ensure their long-term viability.

Table 11: Use of consultants in the planning process

Source of Consultancy	Mean	Weighted Mean	Source of Consultancy	Ranking	Reasons
Consulting private Firms	1.480	0.2157	Free Lance Individual	1	Less expensive and flexible
Consulting Academic Institution	1.910	0.2784	Consulting Academic Institution	2	Expensive, though negotiable
Free Lance Individual	3.470	0.5058	Consulting private Firms	3	Very expensive and hard to negotiate
Mean average	2.287	0.3333			
Total weight	6.860				

How Ma-SMEs plan for their expansion and growth goals

To identify the techniques or plans adopted by Ma-SMEs to achieve growth and expansion goals, respondents of the study were given seven multiple-response items (practices) to measure how they plan to achieve growth and expansion goals in the study region. A five-point Likert scale was used, with 1 indicating strong agreement and 5 indicating strong disagreement. The results for this variable were analyzed and ranked to determine which techniques were more commonly used by the participating Ma-SMEs than others. The weighted mean score is used to portray the

analysis of the findings. The results are summarized in Table 12. Plant expansion (T1), which is related to a firm's growth as a path to higher production and thereby higher earnings, was ranked as the highest with a weighted average score of 5.50, followed by personal family income (T3), and succession planning (T5) as the third technique, according to the findings (Table 12). Table 12 displays also the findings of other techniques which are less weighted Hiring and training of key management personnel (T2), New product development (T4) and Advertising (T6).

Plant expansion (T1)

Although Ma-SMEs have stated that expanding their plants is the greatest way to grow because it increases output and sales, this study interprets these statements as additional perceptions and dreams. Although this study did not inquire about their financial capabilities to obtain resources such as machinery, the available literature suggests that Ma-SMEs face capital difficulties (Nkwabi and Mboya, 2019; Mashenene *et al.*, 2014). The economic crisis has placed doubt on Ma-SMEs' ability to grow to utilize plants and machinery.

Personal family income (T3)

It's also not surprising that Personal family income (T3) is being used to promote the firm's growth. Most Ma-SMEs are driven by family values and emotions since they lack a formal organizational structure. To retain the family's reputation, the family takes every effort to make the business survive. Due to family control, this is achievable. Family control allows the family to have complete control over the firm's management and pursue its interests through the family business (Berrone *et al.*, 2010; Gomez-Mejia *et al.*, 2007). Family capital, or total family ownership resources, facilitates and promotes family overall productivity in the short and long term (Danes *et al.*, 2009). Thus, during difficult times, a family may decide to use family resources to save the family business.

Succession plan (T5)

Small and Medium Enterprises' succession plans in Tanzania are evident. This report confirms earlier studies in verifying the existence of succession planning in Tanzania (Kiwia *et al.*, 2019; 2016). For business continuity, many families' business seeks to establish a succession plan (T5). A succession plan, according to this study, is a strategy for keeping a family's business ownership for succeeding generations. The practices of a succession plan implied that owners of Ma-SMEs in Tanzania have been making efforts to promote their industries from one generation to the next.

However, being weighted in third place indicates that succession planning is still not a top priority for most Ma-SMEs. This finding is reinforced by comparable information from Mori (2014), who claims that one of the primary variables related to the lack of continuity and growth of SMEs in Tanzania is inadequate succession. A key strategy for a family business's long-term viability is succession planning. Lubawa (2021) defined family businesses as the management and control of a family firm passed down from generation to generation. Unfortunately, in African culture, training the child for the family business's continuation is not a priority. After the age of 18, the child should be expected to live and work independently. Family members are hesitant to stay in the family firm because the payments are lower. It's also tough to organize the estate, or who inherits the family's assets once the parents pass away. Inheritance causes strife in the family. Thus according to Magasi (2016), SME owners do not plan business successors while they are still alive. Mori (2014) and Akinyele (2007) conducted the study and found that business owners fail to plan for succession owing to a lack of relevant skills, knowledge, and experience. Therefore, more education is needed, however, on the necessity of succession planning and how to best prepare succession planning for Ma-SMEs.

Table 12: How Ma-SMEs plan for their expansion and growth goals

Techniques	Weighted score(WMS)	meanRank
Plant expansion (T1)	5.50	1
Hiring and training of key management personnel (T2)	3.26	4
Personal family income (T3)	5.28	2
New product development (T4)	3.19	5
Succession plan (T5)	3.66	3
Advertising (T6)	2.17	6

Hiring and training of key management personnel (T2)

The success of the Ma-SME industry is determined by employee satisfaction with a variety of skills to be productive at work. Employee satisfaction and skills enhancement are vital to a business company's success in the present world of affluent business turbulence, complexity, and rivalry (Shuvro and Alam, 2020). Employees who are satisfied with their work environment

contribute to the creation of a healthy working environment (Rahaman and Uddin, 2022; Baqir et al., 2020). Thus, after an employee is hired, he or she should receive frequent job training to improve their abilities and keep up to date. However, the findings of this study reveal that employee training is not the main priority for achieving the company's growth goals. This could be attributed to Tanzania's challenging operating business climate for Ma-SMEs. Many Ma-SMEs suffer from a lack of creativity, human capital, business skills, and obsolete business practices.

New product development (T4)

New Product Development (NPD) is the process of bringing a new product to market. NPD translates clients' needs into product design specifications. Market pressures may have also a significant impact on new product development. The Ma-SME may need to engage in this process to capitalize on a new opportunity due to changes in consumer tastes, increased competition, and technical developments. The firms need to invest in new product development to stay competitive (Vezzetti, Alemanni, & Morelli, 2017; Lee, Mackenzie, Fong, & Sherman, 2016). The findings of this study suggest that new product development is not a viable growth strategy for Ma-SMEs in Tanzania. This is an indication that Ma-SMEs in Tanzania have a limited ability to develop new products.

Because of the rising globalization of economies, diversification of products, and shorter product life cycles, new product development is becoming increasingly important for competitiveness. This limited capability on NPD is not healthy for Ma-SMEs, which are an essential part of Tanzania's economy. Foreign-made products would inevitably dominate Tanzania's domestic market. This will have a substantial detrimental impact on domestic industrial production, loss of government revenues, employment losses, and the eventual collapse of the Ma-SMEs sub-sector. Tanzanian SMEs encounter challenges including a lack of innovation, capital, and professional recruitment capabilities. Due to these difficulties, they are unable to fund the purchase of modern technology in the best to keep up with the NPD due to a lack of financial resources. Because of its iterative, evolutionary, cooperative, and uncertain aspects, NPD is complicated and unstructured relative to manufacturing processes (Jun and Suh, 2008).

Advertisement (T6)

Ma-SMEs have found that advertisement (T6) is the last preference for their growth

(WMS=2.17). The Cambridge dictionary defines advertising as "making things known widely or in public to sell them". In the context of third-world countries including Tanzania, radio and television are still used to deliver broadcasts to the masses. These systems are still somewhat expensive. As a result, it's not surprising that Ma-SMEs don't regard advertising as a viable growth strategy. This might also be influenced by various reasons including; budgetary constraints, and insufficient utilize the opportunity for a more flexible response to market development through social media (Belás, Amoah, Dvorský, & Šuleř, 2021). This study suggests that the time has come for Ma-SMEs in Tanzania to utilize social media as a reliable and comfortable communication channel. It has been demonstrated that the use of social media reduces costs and increases efficiency when compared to traditionally used communication networks such as television and radio and that they allow customers to communicate directly with the managers of specific SMEs without the use of intermediaries (Crammond *et al.*, 2018). According to Bucher and Helmond, (2017) and Parveen et al., (2016), social media has made it easier for businesses to engage with customers daily.

Evaluation of the Ma-SMEs plans

Periodic evaluation is essential to fulfil any planning objectives. The purpose is to find flaws in the planning and review process before the plans become stalled in implementation. This study asked those with a long-range written plan how often they evaluate the plan to identify the status of the evaluation. Of the 167 firms, only 86 (51%) were found to have written long-range plans. It is evident from Table 13 that monthly evaluation is the most preferable review by Ma-SMEs as suggested by 42 (49%) firms. Although the two firms stated that they do not evaluate, the overall picture shows that at least Ma-SMEs in Tanzania do periodical reviews of expectations and actual results regularly. The findings support the existence of evaluation practices among SMEs, which are consistent with findings from studies by Gică and Ioana (2012), Ibrahim, Angelidis, and Parsa (2004), and Rue & Ibrahim (1996), which also found that SMEs programs are evaluated weekly, monthly, quarterly, semi-annually, and annually.

Table 13: Frequency of evaluation of written long-range plans

Frequency	Number of Ma-SMEs	Percentage
Weekly or less	12	14%
Monthly	42	49%

Quarterly	9.0	10%
Semi-annually	5.0	6.0%
Annually	16	19%
Never	2.0	2.0%
Total	86	100%

Discussion

Statistics and Data Analysis

Table 1 shows the positions of those who took part in the survey. The survey inquired about the respondent's current working titles to ascertain if they are a member of the Top Management Team (TMT). The findings show that the respondents are senior executives in firms, with 125 (74.9%) holding the position of Managing director, 36(21.6%) were Senior managers,4(2.4%) holding the position of manager, while few of them were Director/Executive,2(1.2%). For their roles as senior executives, it assumed that they have clear and relevant information on planning practices to be shared in this study (see table 1).

Analysis of data and the reporting of the results of those analyses are fundamental aspects of the conduct of research. Accurate, unbiased, complete, and insightful reporting of the analytic treatment of data (be it quantitative or qualitative) must be a component of all research reports. Researchers in the field of psychology use numerous approaches to the analysis of data, and no one approach is uniformly preferred as long as the method is appropriate to the research questions being asked and the nature of the data collected. The methods used must support their analytic burdens, including robustness to violations of the assumptions that underlie them, and they must provide clear, unequivocal insights into the data.

Ownership Status

In terms of ownership, the statistics demonstrate that in the study area, single-family businesses hold 157(94%) of Ma-SMEs. Other Ma-SMEs, held by a mix of members through friendship associations, are owned to a lesser extent (6 %) (Table 2). As a result, it's not surprising that an overwhelming majority of Ma-SMEs (85 per cent) lack long-term written plans that serve as the primary guide for where the firm will go in the following years. Depending on the situation, they usually have short-term or temporary plans. According to Lubawa (2021), in family businesses,

planning is often handled by the owner or family members rather than by employees. According to Gallo and Sveen (1991), a family firm is defined by its members' participation in management as well as their significant position as decision-makers. Non-family Ma-SMEs have a collective guide that is not related to the individual families of the business partners. In these firms, employees collectively discuss their plans and keep track of planning decisions, implementation and shortcomings.

It was noted that 7(4 %) of all firms were registered with the BRELA, 88(53%) with SIDO and 72(43%) with Local Government Authority-LGA (District/City Councils) (Table 3). The registration gives the impression that they are known, and pay taxes and other levies. Per this understanding, Ma-SMEs carry out their business formally and legally. Thus, the Governments and other stakeholders have the opportunity to look at a mechanism to help Ma-SMEs' planning education to improve their planning capacity to catch up with global change. The capacity that may facilitate their growth commercially and become large firms.

Education Status of Ma-SMEs Owners

The findings also revealed that the majority of Ma-SMEs have a low level of education, either primary (31%) or secondary (29%) schooling, with only 2% having no formal education (Table 2). To put it another way, 60% of them had not completed a college/university degree, which would have exposed them to more relevant skills and information than primary or secondary school, which is too broad.

However, the study discovered that about 38% of those respondents had completed college or University. This is noteworthy since it was previously assumed that those with a formal education would seek employment rather than engage in small-scale manufacturing. According to Storey (1994), the level of education provides a great deal of confidence in dealing with business issues in general such as financial planning issues and its sources as commercial banks. It is the expectation of the study that higher education managers help them in combating the business environment than those with lower education. The study by Timothy (2022) reveals that SME managers in Tanzania with higher education have more possibilities to focus on non-technological innovation than their less educated counterparts. Overall, the Ma-SMEs sector employs managers with various levels of education. The findings are in line with Lubawa and Van Auken's (2019) research, which found that persons with both high and low levels of

education participate in this small-scale manufacturing sub-sector.

Company Age

Table 5 indicates the trading company's age in the years since it was founded. The number of years in a business increases the number of reputations, experience and knowledge of employees (Welmilla et al., 2011). The results indicate that the Ma-SMEs age of business operations was between 1 to 5 years, 88 (53%), 6 to 10 years, 68(41%) and more than ten years, 13(6%). This confirms that the companies have considerable experience to participate in the study. It also indicates that the establishment of new Ma-SMEs is still sustainable in Tanzania since the country introduced the SME policy in 2003, following the liberalization of the country's planned economy to a market economy, encouraging more active participation of the SME sector to accelerate economic growth. Yet there are reasons to assume that Ma-SMEs show planning intensity practices despite different ages and still can go on with operations despite encountering planning challenges, especially long-term planning.

Planning timeframe

The respondents were asked to rate the extent to which their company engaged in the aforementioned planning schedule on a five-point scale. This scale read as follows: Always (5), Often (4), periodically (3), Seldom (2), and Never (1). Mean values were compared for two planning variables (short-range planning [SR_PLAN] vs mid-range planning (MR_PLAN) with a sample size of 167. The mean was higher for variable SR_PLAN (M=3.91, SD=0.924) than for variable MR_PLAN (M=2.67, SD=0.978). A paired t-test using SPSS indicates that the difference in means (difference = 1.24) was statistically significant, $t(166) = 11.907$, $p=.000$. The results suggest that short-range planning was significantly more practices by Ma-SMEs than medium-range planning. Further analysis found that, the mean values for two planning variables SR_PLAN vs LR-range planning (LR_PLAN) with a sample size of 167. The mean was higher for variable SR_PLAN (M=3.91, SD=0.924) than for variable MR_PLAN (M=3.66, SD=1.117). A paired t-test using SPSS indicates that the difference in means (difference = 0.25) was statistically insignificant, $t(166) = 2.094$, $p>0.05$. The results suggest no significant difference in the practices of short-range planning and long-range planning for Ma-SMEs. The conclusion is that there is no difference between short and long-term planning for Ma-SMEs.

Further analysis also for Mean values was compared for two planning variables (short-range

planning [MR_PLAN] vs mid-range planning (LR_PLAN) with a sample size of 167. The mean was higher for variable LR_PLAN (M=3.66, SD=1.117) than for variable MR_PLAN (M=2.67, SD=0.978). A paired t-test using SPSS indicates that the difference in means (difference = 1.24) was statistically insignificant, $t(166) = -8.184$, $p=0.05$. The results suggest significant differences in the practices of mid-range planning and long-range planning for Ma-SMEs. The results suggest that long-range planning was significantly more practised by Ma-SMEs than medium-range planning.

We conclude there before that, there were significant differences in the timeframe for planning. Short-term plans have been used more frequently by Ma-SMEs than other alternatives. This is expected because SMEs are relying heavily on short-term financing strategies (hereinafter referred to as working capital management [WCM]) (Yazdanfar & Öhman, 2016; Javid, 2014) to prosper and survive. WCM assesses a company's short-term financial health by examining the mix of short-term assets and liabilities kept on a day-to-day planning basis. WCM aims to solve the problem of how much short-term assets like inventory, receivables, and cash, as well as short-term commitments like account payables, a company should keep at any one time to optimize profits. To put it another way, most small businesses do not have long-term plans. This poses a threat to Tanzanian Ma-SMEs' survival. Ma-SMEs only exist for today; they have no idea where they will be tomorrow.

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How Ma-SMEs plan for their expansion and growth goals

To identify the techniques or plans adopted by Ma-SMEs to achieve growth and expansion goals, respondents of the study were given seven multiple-response items (practices) to measure how they plan to achieve growth and expansion goals in the study region. A five-point Likert scale was used, with 1 indicating strong agreement and 5 indicating strong disagreement. The results for this variable were analyzed and ranked to determine which techniques were more commonly used by the participating Ma-SMEs than others. The weighted mean score is used to portray the analysis of the findings. The results are summarized in Table 12. Plant expansion (T1), which is related to a firm's growth as a path to higher production and thereby higher earnings, was ranked as the highest with a weighted average score of 5.50, followed by personal family income (T3), and succession planning (T5) as the third technique, according to the findings (Table 12). Table 12 displays also the findings of other techniques which are less weighted Hiring and training of key management personnel (T2), New product development (T4) and Advertising (T6).

Plant expansion (T1)

Although Ma-SMEs have stated that expanding their plants is the greatest way to grow because it increases output and sales, this study interprets these statements as additional perceptions and dreams. Although this study did not inquire about their financial capabilities to obtain resources such as machinery, the available literature suggests that Ma-SMEs face capital difficulties (Nkwabi and Mboya, 2019; Mashenene et al., 2014). The economic crisis has placed doubt on

Ma-SMEs' ability to grow to utilize plants and machinery.

Personal family income (T3)

It's also not surprising that Personal family income (T3) is being used to promote the firm's growth. Most Ma-SMEs are driven by family values and emotions since they lack a formal organizational structure. To retain the family's reputation, the family takes every effort to make the business survive. Due to family control, this is achievable. Family control allows the family to have complete control over the firm's management and pursue its interests through the family business (Berrone et al., 2010; Gomez-Mejia et al., 2007). Family capital, or total family ownership resources, facilitates and promotes family overall productivity in the short and long term (Danes et al., 2009). Thus, during difficult times, a family may decide to use family resources to save the family business.

Succession plan (T5)

Small and Medium Enterprises' succession plans in Tanzania are evident. This report confirms earlier studies in verifying the existence of succession planning in Tanzania (Kiwia et al., 2019; 2016). For business continuity, many families' business seeks to establish a succession plan (T5). A succession plan, according to this study, is a strategy for keeping a family's business ownership for succeeding generations. The practices of a succession plan implied that owners of Ma-SMEs in Tanzania have been making efforts to promote their industries from one generation to the next. However, being weighted in third place indicates that succession planning is still not a top priority for most Ma-SMEs. This finding is reinforced by comparable information from Mori (2014), who claims that one of the primary variables related to the lack of continuity and growth of SMEs in Tanzania is inadequate succession. A key strategy for a family business's long-term viability is succession planning. Lubawa (2021) defined family businesses as the management and control of a family firm passed down from generation to generation. Unfortunately, in African culture, training the child for the family business's continuation is not a priority. After the age of 18, the child should be expected to live and work independently. Family members are hesitant to stay in the family firm because the payments are lower. It's also tough to organize the estate, or who inherits the family's assets once the parents pass away. Inheritance causes strife in the family. Thus, according to Magasi (2016), SME owners do not plan business successors while they are still alive. Mori (2014) and Akinyele (2007) conducted the study and found that

business owners fail to plan for succession owing to a lack of relevant skills, knowledge, and experience. Therefore, more education is needed, however, on the necessity of succession planning and how to best prepare succession planning for Ma-SMEs.

Hiring and training of key management personnel (T2)

The success of the Ma-SME industry is determined by employee satisfaction with a variety of skills to be productive at work. Employee satisfaction and skills enhancement are vital to a business company's success in the present world of affluent business turbulence, complexity, and rivalry (Shuvro and Alam, 2020). Employees who are satisfied with their work environment contribute to the creation of a healthy working environment (Rahaman and Uddin, 2022; Baqir et al., 2020). Thus, after an employee is hired, he or she should receive frequent job training to improve their abilities and keep up to date. However, the findings of this study reveal that employee training is not the main priority for achieving the company's growth goals. This could be attributed to Tanzania's challenging operating business climate for Ma-SMEs. Many Ma-SMEs suffer from a lack of creativity, human capital, business skills, and obsolete business practices.

New product development (T4)

New Product Development (NPD) is the process of bringing a new product to market. NPD translates clients' needs into product design specifications. Market pressures may have also a significant impact on new product development. The Ma-SME may need to engage in this process to capitalize on a new opportunity due to changes in consumer tastes, increased competition, and technical developments. The firms need to invest in new product development to stay competitive (Vezzetti, Alemanni, & Morelli, 2017; Lee, Mackenzie, Fong, & Sherman, 2016). The findings of this study suggest that new product development is not a viable growth strategy for Ma-SMEs in Tanzania. This is an indication that Ma-SMEs in Tanzania have a limited ability to develop new products.

Because of the rising globalization of economies, diversification of products, and shorter product life cycles, new product development is becoming increasingly important for competitiveness. This limited capability on NPD is not healthy for Ma-SMEs, which are an essential part of Tanzania's economy. Foreign-made products would inevitably dominate Tanzania's domestic market. This will have a substantial detrimental impact on domestic industrial production, loss of

government revenues, employment losses, and the eventual collapse of the Ma-SMEs sub-sector. Tanzanian SMEs encounter challenges including a lack of innovation, capital, and professional recruitment capabilities. Due to these difficulties, they are unable to fund the purchase of modern technology in the best to keep up with the NPD due to a lack of financial resources. Because of its iterative, evolutionary, cooperative, and uncertain aspects, NPD is complicated and unstructured relative to manufacturing processes (Jun and Suh, 2008).

Advertisement (T6)

Ma-SMEs have found that advertisement (T6) is the last preference for their growth (WMS=2.17). The Cambridge dictionary defines advertising as "making things known widely or in public to sell them". In the context of third-world countries including Tanzania, radio and television are still used to deliver broadcasts to the masses. These systems are still somewhat expensive. As a result, it's not surprising that Ma-SMEs don't regard advertising as a viable growth strategy. This might also be influenced by various reasons including; budgetary constraints, and insufficient utilize the opportunity for a more flexible response to market development through social media (Belás, Amoah, Dvorský, & Šuleř, 2021). This study suggests that the time has come for Ma-SMEs in Tanzania to utilize social media as a reliable and comfortable communication channel. It has been demonstrated that the use of social media reduces costs and increases efficiency when compared to traditionally used communication networks such as television and radio and that they allow customers to communicate directly with the managers of specific SMEs without the use of intermediaries (Crammond et al., 2018). According to Bucher and Helmond, (2017) and Parveen et al., (2016), social media has made it easier for businesses to engage with customers daily.

Evaluation of the Ma-SMEs plans

Periodic evaluation is essential to fulfil any planning objectives. The purpose is to find flaws in the planning and review process before the plans become stalled in implementation. This study asked those with a long-range written plan how often they evaluate the plan to identify the status of the evaluation. Of the 167 firms, only 86 (51%) were found to have written long-range plans. It is evident from Table 13 that monthly evaluation is the most preferable review by Ma-SMEs as suggested by 42 (49%) firms. Although the two firms stated that they do not evaluate, the overall picture shows that at least Ma-SMEs in Tanzania do periodic reviews of expectations and actual

results regularly. The findings support the existence of evaluation practices among SMEs, which are consistent with findings from studies by Gică and Ioana (2012), Ibrahim, Angelidis, and Parsa (2004), and Rue & Ibrahim (1996), which also found that SMEs programs are evaluated weekly, monthly, quarterly, semi-annually, and annually.

Conclusion, Implications and the area for further research

Conclusion

The paper examines the status planning of Manufacturing SMEs in Tanzania and it was observed that the majority were not registered with the registering authority BRELA thereby operating informally. This study employed 167 manufacturing SMEs operating in Dodoma Tanzania. Its analysis provides several findings,

The Ma SMEs found in the study area were single-family (94%), these SMEs majority of these firms were run informally and the owners were managers of the business firms. It was found that only about 4% of the manufacturing SMEs were registered by the registering authority BRELA whereas the rest of the SMEs were unregistered. In an account of the fact that the majority of Ma SMEs were family-owned, it was also found that the majority of the owners had low level education, where the study found that only 38% of the owners had a college education, thereby impacting highly the planning of their SMEs. This was also aggravated by the finding that the majority of the Ma SMEs found in the study were young or between one to five years of operations and therefore inexperienced. In the study area, short-range planning was highly practised as compared to long-range or short-range planning; planning for sales and capital growth were major practices that emerged in the study. The study found also that Ma SMEs used financial reports for planning mainly for sales forecast and cash flow analysis and little consultation was employed by the managers or the firms to assist in the planning process. The majority of the Ma SMEs used free-lance individuals in planning activities for their business activities in Dodoma. They also planned more for business extensions followed by increasing family incomes were their main objectives.

Implications

Since the study found that the majority of the participants or managers of the Ma SMEs had little education, this impacted the whole planning activities in Dodoma, allowing a majority of the firms to use free Lance as the major planning method. Ma SMEs were unregistered by the

registration authorities such as BRELA, thereby making these firms unknown by the governments and therefore low revenue collection from them and loss of trust from MFIs when seeking loans for extensions or installation of a new factory, inadequate long-range planning affect the focus of the future of the businesses growths.

Area for further research

The study was done in selected parts of Dodoma and therefore the results cannot be taken for generalizations for the whole country. More studies need to be done in other parts of the country for the same to provide adequate information on the planning status of Ma SMEs in Tanzania. The study also used a sample of 167 Ma SMEs in a single manufacturing industry and thus lacked the quality of representational across industries. It is important therefore that other studies in the related field be done to provide plausible data for further references. The study also did not compare planning status and growth in either sales, expansion, increase in return on investment, employees, capital or other forms of growth. This validates the reason for further studies to come up with such studies that might show whether such a relationship exists between planning and growth and at what level if any. Lastly, more studies can be done to examine why Ma SMEs in Dodoma do not plan for long range, register for authorities responsible for business/company registration, and hire consulting firms in planning for their business.

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Examining Effectiveness of Customer Complaint Responses on NMB Mkononi Satisfaction in Tanzania: A Case of NMB Bank Plc in Dodoma City

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Abstract

The study examined the effectiveness of customer complaint responses on NMB Mkononi satisfaction in Tanzania with the focus of NMB Bank PLC in Dodoma city. It basically intended to determine the extent to which NMB is effective in responding to customer complaints behind NMB Mkononi services. A sample size of 124 respondents was involved. The main respondents of the study were NMB Mkononi customers as well as few staff, and NMB branch managers. Data were collected through questionnaires, interview, and documentary review then analyzed both qualitatively and quantitatively with support SPSS version 25.0. Mixed research approach was used which supported by descriptive research design. Data analysis was made possible through descriptive statistics whereby mean and standard deviations were used. The study found that there are moderate uses of NMB Mkononi services in Dodoma city. It was also revealed that there are effective NMB Mkononi customer complaint responses by the NMB bank (total mean=3.56). The study concluded that NMB need to provide best service to the customers with regard to the first time and all the time. It was further recommended that there should be improved fund investment for reliable network, ICT experts, facilities and copying the technological changes for customer satisfactions and profit making.

Key words: *Complaint, customer complaint, NMB Mkononi, customer satisfact*

Introduction

Globally, customers' complaint keeps on increasing in the banking sector a day by day. It is not possible for banks to obliterate complaints entirely but they could get wise to reply to them in impressive way (Madan & Khandelwal, 2020). In a banking industry, service failures are unavoidable because of human and non human faults. These failures inevitable create to customer complaints. Cartwright and Green (1997) entails that in the banking sector, customers who walk away without complaining are really saying goodbye. They mean "you let me down and you want get another chance". Those who complain are saying hello! They mean "you let me down but I want to give you a chance to make it up, I want to give you a chance to make it up to me" (Cartwright & Green, 1997).

In the banking sector, customer service and satisfaction should be the prime concern of any bank. The bank believes that providing prompt and efficient service is essential not only to attract new customers, but also to retain existing ones (Shammout & Haddad, 2014). However, banks minimize instances of customer complaints and grievances through proper service delivery and review mechanism and to ensure prompt redress of customer complaints and grievances (Uppal, 2010). The banking dynamic and its potentiality brings about competitive context which make banks to seek for a lasting relationship with their customers as well as ensuring the management of the complaints as it well supported by Wu (2013), that complaint handling is critical to customer loyalty and retention in the banking industry.

Customer complaint responses are the process of dissemination of information aimed at identifying and correcting various causes of customer dissatisfaction (Nimako & Mensah, 2014). It defines strategies used by companies to solve and learn from the previous mistakes in order to restore customer confidence in organizational reliability. Therefore, information gathered from customer complaints is of great significance for the quality management process, as it can be used to correct and learn about weaknesses in product quality and delivery system (World Bank, 2019). Customers complaints are also takes place when product or service performances are

not up to their expectations. Understanding the potential sources of complaints and customers' reactions to negative situations are mandatory requirements in the design of effective service recovery strategies. In this regard it should be noted that customer responses to various errors or unpleasant incidents are not unique (Voinea *et al.*, 2011).

NMB Mkononi is a new brand name of both NMB Mobile and CLiK which was officially launched on 7th October, 2019 in Dar-es-Salaam city. The reasons behind its start was based on the changes of the name due to fact that the NMB Mobile name was not resonating with customers and therefore was renamed NMB Mkononi to make it more relevant in the market and communicates that all banking services can be accessed in the palm of your hand. NMB Bank PLC has launched a NMB Mkononi as digital campaign focusing on the improvement of its Mobile platforms and the NMB CLiK App to enhance accessibility and convenience to access financial services (NMB Annual Report, 2019). Its main service offered includes; cash withdraw, pay bills open account, loan as well as checking balance and statement.

NMB Mkononi has brought about access of banking services in the palm of customers' hands, anytime and anywhere. The bank decided to rename its mobile platform so as to ensure that all Tanzanians, from all walks of life can resonate with the mobile banking services and be able to access NMB's banking services easily in the palm of their hands (NMB Annual Report, 2019). Based on this scenario, NMB bank has increased its number of customers who uses NMB Mkononi services. This resulted into increased complaints as the services found to be supportive to customers leading to failures for some times and even not being able to respond to some requests. In this regard, this study intends to examine the effectiveness of customer complaint responses on NMB Mkononi satisfaction in Tanzania with the focus of NMB Bank Plc in Dodoma city.

Literature Review

Customer complaints: refers to a report from a consumer providing documentation about a problem with a product or service or again (Boshoff, 1997).

Complaint management: refers to the way in which companies systematically handle problems in customer relations (Jeschke *et al.*, 2000),

Customer satisfaction: refers to a person's satisfaction with a product, a service, or a supplier (Terpstra *et al.*, 2014).

NMB Mkononi: refers to a new brand of NMB Mobile created by NMB to meet the current customer demand (NMB Bank Annual Report, 2019).

The effectiveness of banks in responding to customer complaints

In Nigeria, Obasi *et al.* (2020) found that that banks responsiveness to complaints by customers, service guarantee and recovery has significant and positive effect on bank customers' satisfaction. It was therefore concluded that service complaints resolutions significantly affect customers' satisfaction positively. In Kenya, a study by Ngetichi (2019) found that once a complaint is responded immediately it leads to customer satisfaction, time taken to respond to a complain increases customer loyalty, methods and techniques employed by employee and staff enhances customer loyalty. Other findings show that compensation and follow up are necessity in managing complaints in bank industry.

In Tanzania, a study by Mashenene and Mkende (2019) on found that network failure, theft of fund transferred, delay of fund delivery and reconciliation were among the complaints facing Mobile Phone Banking (MPB) usage. The study recommended that, Tanzania Communications Regulatory Authority (TCRA) needs to improve the stability of networks and enact laws against theft cases via Mobile Phone Services. A study by Ndulilo (2014) on "*customer satisfaction and complaints handling in banks*" revealed that there were challenges that faced management of the Barclays bank in complaint handling as about 45% of the customer responded that the service level in complaint handling was average. The

study also found that time taken to handle complaint was not satisfactory as it opinioned by 44% that they were uncertain with the time taken to handle complaints.

Methodology

The study was conducted in Dodoma city within three NMB Bank PLC branches (Dodoma branch, Mazengo branch and Makole business centre). The motives alongside the selection of the study area include; number of customers being serviced, good experiences on NMB Mkononi services by the staff, and increased number of customers due to the Government shift from Dar-es-Salaam to Dodoma. The study employed mixed research approach which was supported by descriptive research design. Questionnaire survey was used to collect data from 112 respondents while interview was used for 12 key informants out 132 total respondents. Additionally, documentary review was applied to the support primary sourced data whereby different documents were reviewed including NMB bank Annual Reports 2018-2021.

Population and Sampling

The study population involved registered individual NMB Mkononi customers receiving banking services from NMB bank Plc. It also involved NMB staff and management team. The study population was from three selected NMB branches from Dodoma city which included Dodoma branch, Mazengo branch and Makole business centre. Purposively and convenience sampling techniques to obtain the sample size. Therefore, the study made use of 132 sample size as the NMB Mkononi customers and key informants from three NMB bank Plc branches in the city. Based on the fact that, three NMB branches are separately in the city then, researcher took time to train three degree students for data collection during banking hours.

Validity and Reliability

In order to ensure validity and reliability, the questionnaire and interview guide was pre-tested in Dodoma NMB bank Plc customers and management to check the accuracy of the instruments in order to make corrections where necessary. During data collection, questionnaire, interview and documentary review were used to collect data and ensure validity of data to be collected.

Ethical Consideration

The study considered ethical issues which involves norms or standards of behaviour that guide moral choices about behavior and relationships with others. Based on this study it included seeking permission for data collection from specified entities including College of Business Education (CBE) and NMB Bank PLC Zonal Manger. Moreover, participants were free on participation that is no one was forced into participation. Further, participants were required to take part voluntarily and the option to withdraw at any time during the study was open. In addition, confidentiality was observed and unauthorized persons had no chance to access the collected data.

Findings and Discussion

In this part results are presented in accord with the few general research questions and identified objective of the study which focused on determining the extent to which NMB is effective in responding to customer complaints behind NMB Mkononi services.

Use of NMB Mkononi Services

According to NMB Bank Internal Progressive Report (2022) there are 1,605,528 registered NMB customers in Dodoma city of which 1,227,264 (98.47%) are active customers (registered and keeps on using their bank accounts) while 24,572 (1.53%) are dormant customers (registered and not using their bank accounts). Dormant customers are caused by number of reasons of which some of them include; customer churn, death, changes of economic status, leaving out of the country and family conflicts (NMB Bank Internal Progressive Report, 2022). Additionally to that, the city has a total of 832,419 NMB Mkononi users of which the majorities are from Dodoma, Mazengo and Makole Business Centre branches. Others are from the remaining branches like UDOM branch (*Ibid*).

Findings in **Table 1** reveals that there is moderate uses of NMB Mkononi service as only 241,339 (30.9%) were active users out of 539,594 (69.1%) who were inactive users for three branches selected in Dodoma city for year ended 2021. These results may imply that NMB management has not yet made outstanding efforts to promote the product including through improved public awareness education. However, there could be other factors associated to the result which may include network problem and bank charges (NMB Annual Report, 2020). Though, there is still a room for NMB management to strategically improve promotional campaigns on NMB Mkononi service usage in order to attract (69.10%) of customers who are inactive users to re-active and join again NMB Mkononi services (NMB Bank Internal Progressive Report, 2022).

Table1: Dodoma, Mazengo and Makole BC use of NMB Mkononi service

Year	NMB Mkononi users	Frequency	Percent
2021	Active users	241,339	30.9
	Inactive users	539,594	69.1
	Total	780,933	100.0

Source: Field surveyed data (2022)

Key: Active users: Registered and keep on using the services

Inactive users: Registered but not using the services

Complaints about NMB Mkononi Services

Data for this question were obtained from NMB bank Plc annual reports 2019-2021 and selected key informants. The data in **Table 2** indicate 5 major complaints associated with NMB Mkononi services. In that regard, network flexibility or failure constitute 49.2% which is ranked the highest complaint claimed by NMB Mkononi customers in Dodoma city. These findings are closely agreed by those of NMB Bank Annual Report (2019) which revealed that most of the complaints on NMB Mkononi fall under network failures by 47.6% of the total complaints. It also articulated by Lambileki (2019) that majority 50.5% of all respondents claimed

about network failure as the main challenge encountered customers using NMB mobile which thereafter rejuvenated to NMB Mkononi.

Additionally, the data in the same table also signify that unsuccessfully money transfer constitute 22.3% which stand as the second complaint confronting NMB Mkononi customers in Dodoma city. Moreover, the data in **Table 2** shows that pin reset issues counts 14.2% which fall under the third complaint hindering NMB Mkononi customers to receive timely services, timely complaint responses and repeat the service as the customer satisfaction indicators. In addition to that, data same vein indicate that delay of transaction comprise 9.2% which represent as the fourth complaint facing NMB Mkononi customers in Dodoma city. Furthermore, data in (Table 4.8) signify that wrong transfer constitute 5.1% which stood as the fifth complaint hindering NMB Mkononi customers to meet timely service delivery in Dodoma city.

Table 2: Complaints about NMB Mkononi services

Complaints	Percentages
Network flexibility/failure	49.2%
Unsuccessfully money transfer	22.3%
Pin reset issues	14.2%
Delay of transaction	9.2%
Wrong transfer	5.1%
Total	100%

Source: NMB Bank PLC Annual Report 2019-2021

The data obtained from NMB annual reports 2019-2021 were cross checked by those obtained from interview method from 12 key informants (bank branch managers, and few experienced bank staff). Findings in **Table 3** below signify that network flexibility was highly pronounced by 33.3% as the major complaint claimed by NMB Mkononi customers in Dodoma city. Participants explained that this situation happens during money withdrawal, and transfer which makes customer being not comfortable with the services. Closely linked to that, unsuccessfully

money transfer counts 25.0% stood as the next complaint claimed by NMB Mkononi customers in the study area. Some of the participants explained that this happens when NMB Mkononi customers process for money withdraw or transfer then at end the system gives back notification that the money transfer has failed.

“..... NMB Mkononi customer complaints are mostly arose at the end of the month where many customers use it for money withdraws and transfers. During this time basically is where network problem happens.....”(Interview held with NMB branch manager on 20th June 2022).

Additionally, pin reset issues and delay of transactions which all together counts 16.7% respectively were also mentioned by the interviewees as the other complaints reported many times by NMB Mkononi customers. NMB Mkononi services require customers to set up their own pin (password) as the protection mechanism for his/her bank account. Unfortunately, many of the customers does forget their password, therefore it needs them to visit NMB branch for the sake of resetting the pin. However, 8.3% of interviewees mentioned wrong transaction as another complaint associated with NMB Mkononi services in Dodoma city.

Table 4: Identified complaints about NMB Mkononi services (n=12)

Complaints	Frequency	Percent
Network flexibility	4	33.3
Unsuccessful fully money	3	25.0
Delay of transactions	2	16.7
Pin reset issues	2	16.7
Wrong transfer	1	8.3
Total	12	100.0

Source: Field surveyed data (2022)

The Extent to which NMB is Effective in Responding to Customers Complaints under NMB Mkononi Services

The findings presented in **Table 5** indicate the Means and Standard Deviations rate of the extent to which NMB is effective in responding to customers complaints under NMB Mkononi services. The findings reveal that, the total mean score stood at 3.56 of all arranged questions for the extent of which NMB is effective. The attained total mean score is above the average mean score of 3.0. Therefore, this result signifies the fact that NMB bank is effective in responding to NMB Mkononi customer complaints in Dodoma city. This results gain closely support from those of NMB Bank Annual Report (2020) which states that the number of NMB Mkononi customers in Tanzania has increased from 3 to 4 million but the increase has influenced by application of advanced technology which helps in timely service delivery as well as timely complaint responses. According to NMB Bank Policy of 2018, customer complaints are solved within 12 hours, 24 hours to 72 hours.

The findings in the same table shows that in case of customers experienced any NMB Mkononi complaints scored a mean of 4.79 whilst for the case of still using NMB Mkononi services scored a mean of 4.40, and in case of telling someone about NMB Mkononi services scored a mean of 4.09 consecutively which are above the average mean score of 3.0. These results implies that majority of NMB customers in Dodoma city have experienced NMB Mkononi complaints as well as majority of them are still using NMB Mkononi services and also many of the customers have explained to their fellow about the NMB Mkononi services. This also means that NMB Mkononi customers are satisfied with services offered together with good level of customer complaints response provided by the NMB bank in the city.

In relation to that, findings indicate that in case of NMB staff are competent in responding NMB Mkononi complaints scored a mean of 3.69, reporting any NMB Mkononi complaints scored a mean of 3.60, whereby for the case of being satisfied with NMB capacity of responding NMB Mkononi complaints 3.58, and in case of NMB staff offer pleasant language during NMB Mkononi complaint reporting

scored a mean of 3.53. In this regard, all arranged questions are above the average mean score of 3.0. This implies that NMB bank has competent staff that makes majority of NMB Mkononi customers to be satisfied. Reporting complaints timely and good capacity of complaints responses by the NMB staff results into timely service delivery, timely responses, repeat service and gives chance for word of mouth which all together makes NMB Mkononi customer satisfaction.

Additionally to that, findings in **Table 5** indicate that in case of the mechanism used by NMB bank support timely responses on the reported NMB Mkononi complaints scored a mean of 3.42, NMB staff cooperative during solving NMB Mkononi complaints scored a mean of 3.40, in case of reported NMB Mkononi complaints timely responded scored a mean of 3.34, NMB bank has enough resources to support timely NMB Mkononi customer complaints scored a mean of 3.37, for the case of being satisfied with NMB staff attitude on responding NMB Mkononi complaints scored a mean of 3.26, and for the case of NMB network support timely NMB Mkononi customer complaint responses scored a mean of 3.25. These results helps to signify that NMB bank has good mechanisms used for timely complaints responses, cooperative staff, enough resources, good staff attitude which all together helps on customer satisfaction.

According to NMB Bank Annual Report (2019) customer complaints responses in NMB bank Plc are under automation through digital platforms including those of NMB Mkononi services by the support of a special programme called '*NMB Cure*'. The bank responses of customer complaints are effective within 72 hours.

Further, findings in the same table shows that in case of reported complaints solved within 24 hours scored mean of 2.76 which below the average mean score of 3.0. This implies that NMB bank is not doing well in the case of solving reported NMB Mkononi complaints with 24 hours. This findings gains support from study of Ndulilo (2014) which found that time taken to handle complaint was not satisfactory as it opinioned by 44% that they were uncertain with the time taken to handle

complaints. However, according to NMB Bank Policy 2018, indicate that NMB complaints are to be solved within 12 hours, 24 hours, and with maximum of within 72. On the other hand, in case of there is long queue during NMB Mkononi complaint reporting scored a mean of 2.89 which is below the average mean score of 3.0. This result signifies that there is no queue if not very few people are in waiting room prepared by NMB bank when NMB Mkononi customers reporting complaints in Dodoma city.

Table 5: The extent of NMB in responding to customers complaints (n=112)

Statements	Mean	Std. Dev
Have you experienced any NMB Mkononi complaints	4.7946	.67301
Have you reported any NMB Mkononi complaints	3.6071	1.46649
Is your reported NMB Mkononi complaints timely responded	3.3482	1.36038
Is the reported complaints solved within 24 hours	2.7679	1.35555
Is NMB network support timely NMB Mkononi customer complaint responses	3.2500	1.47959
NMB staff offer pleasant language during NMB Mkononi complaint reporting	3.5357	1.34183
Are you satisfied with NMB staff attitude on responding NMB Mkononi complaints	3.2679	1.42046
Are the mechanism used by NMB bank support timely responses on the reported NMB Mkononi complaints	3.4286	1.38013
Is NMB bank has enough resources to support timely NMB Mkononi customer complaints	3.3750	1.37628
Are the NMB staff cooperative during solving NMB Mkononi complaints	3.4018	1.35872
Do you think NMB staff are competent in responding NMB Mkononi complaints	3.6964	1.28638
There is long queue during NMB Mkononi complaint reporting	2.8929	1.58459

Are you satisfied with NMB capacity of responding NMB Mkononi complaints	3.5893	1.39854
Have you ever tell someone about NMB Mkononi services	4.0982	1.26605
Are you still using NMB Mkononi services	4.4018	1.19654
Total Mean Score	3.56	

Source: Field surveyed data (2022)

Results from in-depth interviews were also used to support the questionnaire responses. Results in Table 6 shows that, NMB has accessible resources for complaint responses as well as NMB staffs are well trained by 25% respectively. These are among the main reasons which make NMB effective in responding NMB Mkononi customer complaints in Dodoma city. However, other participants were in a view that complaints are solved for maximum within 72 hours, more investment is done by the bank and keeps on to improve network capacity, and NMB use digital platform to receive and report complaints counts 16.7% correspondingly. Participants explained that, NMB Mkononi complaints are timely received and reported to the headquarters offices due to the improved technology used by the bank including the use of NMB Cure. One of the NMB branch managers said;

“.....NMB set up different programs and strategies for improved customer complaints handling including those associated with NMB Mkononi service. The bank launches new technologies which offers digital platforms for solving the complaints like the use of NMB CURE which helps to report the complaints straight to the headquarters of the bank and hence get timely responses.....”(Interview held with branch managers on 15th June 2022).

According to NMB Annual Report (2021), the bank is well confident and capable (resource based) that on solving customer complaints timely regarding on the core support achieved through the on-going investments in technology which helps to

provide more relevant solutions for the services complaints for a broad range of multinational clients.

Table 6: The extent of NMB in responding to customers complaints (n=12)

Statements	Frequency	Percent
NMB has accessible resources for complaint responses	3	25.0
NMB staff are well trained	3	25.0
Complaints are solved for maximum within of 72 hours	2	16.7
More investment is done and keep on to improve network capacity	2	16.7
NMB use digital platform to receive and report complaints	2	16.7
Total	12	100.0

Source: Field surveyed data (2022)

Concussion and Recommendation

Conclusion

It important to understand that, digital platforms in banking industry like NMB Mkononi services have been viewed by banks and customers as a cost reduction channels. It also saves time and knows no geographical boundaries. This study is of the view that it is always better to deliver the best service to the customers with regard to the first time, all the time. It is important to understand that customer complaint responses should be seen as a mechanism for addressing discrepancies that may occur between the bank's promises or the expectations of customers, and the actual service delivered. It is also widely agreed that un-responded complaints may lead to customer churn in the bank.

Recommendation

The issues of policy formulation and intervention in the area of digital financial platform are to be highly considered by policy makers. In that regard, digital banking legal frameworks like that of Cybercrime Act No. 14 of 2015 need to be closely reinforced to safeguard customers' money and then increase trust to banks. Additionally, improved fund for ICT experts, facilities and copying the technological changes and improvement in order to meet customer need on friendly use of NMB

Mkononi services. Moreover, there is need of improved efforts in developing internet and communication facilities in which this may include the establishment of National Information and Communication Technology Broadband backbone (NICTBB) project which gives chance for operators and users base. In addition to that, NMB customers are advised to use handsets which are capable and network friendly whereby this would help to reduce the problem of network and get timely responses from the request reported to the digital platforms like NMB Mkononi services.

Further Study

This study recommends that further study need focus on the impact on technology on effective customer complaint responses in commercial banks, Tanzania. This study would help to create better awareness to the commercial banks, customers and public about the importance of technology application in complaints responses.

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Effects Of Social Media Marketing Platforms on Sales Revenue at Tanzania Telecommunication Corporation

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Abstract

The innovative method of marketing that uses social media to inform consumers about a product, service, or brand can enhance sales by increasing consumer awareness. This study looks at the effects of social media marketing platforms on sales revenue in Tanzania Telecommunication Company Limited. Specifically, the study assesses the commonly used social media platform in sales revenue at Tanzania Telecommunication Corporation. The study is quantitatively designed involving the use of questionnaires in data collection. A cross-sectional study approach was used to gather data from a sample of fifty (50) respondents from Dodoma and Mwanza TTCL commercial regions. Data gathered for this study were analyzed through descriptive statistics. The results of the study showed that Instagram is the social media marketing platform that contributes most to sales income, whereas Twitter is favorably significant but unrelated to TTCL's sales revenue. The study concludes that the use of Instagram highly promotes sales revenue more than other social media marketing platforms. The study recommends that in order to promote the effective use of technology in a public institution, the government shall enact regulations that will push public institutions to use social media marketing platforms for advertising.

Keywords: social media, marketing strategy, sales revenue

Introduction

Marketing of goods and services has remained one of the fields that call for daily innovation on a global scale. In particular, social media marketing, which is defined as the use of electronic media by marketers to promote goods or services into the market with the primary goal of luring customers and allowing them to interact with the brand through social media, has emerged in recent years as a crucial marketing tool (Yasmin *et. al.*, 2015). For instance, social media platforms like Facebook, Instagram, WhatsApp, and Twitter, as well as websites, online advertisements, and

opt-in emails, have grown in popularity across the globe and in Africa in particular (Manda *et al.*, 2016).

Increasing Social media marketing in Africa has been spurred by the use of smart mobile phones and ICT infrastructure. According to observations made from the study in Nigeria by Odyssey (2019), of the 17 million Nigerians who use smartphones, about 50% were exposed to social media marketing. In addition to that Murphy *et al.*, (2016) Smith, (2017) Ukpabi & Karjaluoto, (2017), mobile phones (smartphones) allow users to obtain business information distributed through various social media platforms. It is important to note that social media marketing is a means of sustaining business growth by enhancing sales performance in Africa, where 80% of adults are estimated to own smartphones (The Global Social Media Report, 2019).

The so-called social media transformation also has an impact on Tanzanian telecommunications firms, such as Tanzania Telecommunications Corporation (TTCL). These include the new social media tactics used by businesses to boost sales through innovative technologies, both functionally and profitably. According to the Tanzania Communication Regulatory Authority (TCRA) Annual Report of 2020, there were approximately 20 million web users in Tanzania, and there were 19,862,525 people overall. As a result, virtual entertainment advertising in Tanzania is currently at a crucial stage due to the fact that there are still relatively few web users and that the usage of online entertainment showcasing platforms is still at a minimum when compared to the overall web users (URT, 2020).

The Tanzania Telecommunications Corporation (TTCL) has a lengthy history of operation. The National ICT Broadband Backbone is represented by TTCL, which primarily controls and operates in the fields of mobile services and fixed telecommunications services (NICTBB). Being the sole agent for the National Broadband in Tanzania makes TTCL a strategic communication solution provider because no communication can be made effectively by any other communication company without using the broadband facilities that are run and controlled by TTCL. The NICTBB is in charge of voice and data transfers.

One of the measures taken by TTCL management to address the issue was to support government initiatives to increase sales revenue through social media marketing strategies. In doing so, the company started utilizing online entertainment showcasing platforms, such as Twitter, Instagram, Facebook, WhatsApp, Email, web search tools, and websites to reach customers. Despite these efforts, Tanzania Broadcast Communications Organization (TTCL) has not yet conducted any experimental reviews to measure the effect of web-based entertainment promotion systems on expanding deal income.

It is further noted that related studies were carried out to address the role of social media marketing on business performance focused on the banking sectors, fashion industries, mobile companies, and small and medium enterprises (Odyssey, 2019; Murphy *et al.*, 2016; Smith, 2017, Ukpabi & Karjaluoto, 2017; Yasmin *et al.*, 2015; Wangmare, 2012; Gangeshwer, 2013, Kumar & Jincy, 2017; Lies, 2019) (TTCL). The empirical evidence demonstrated a considerable impact of social media marketing tools on the success of sales. Others shown a favorable impact of social media marketing tools on SMEs' net profit and sales ratio (Yasmin, Tasneem and Fatema, 2015; Nyambu, 2017; Njau and Karugu, 2014), Though the studies left a gap in knowledge on the effects of social media marketing strategies on improving sales revenue in Telecommunication companies, Therefore, the present study bridges this gap of knowledge and determine if there is any relationship between social media marketing strategy and sales revenue in Tanzania Telecommunications Corporation. Specifically, looking at; commonly used social media marketing tools in Tanzania Telecommunications Corporation (TTCL).

Literature Review

Theoretical Framework

Social media

The phrase "social media" refers to a computer-based technology that makes it possible to share concepts, ideas, and knowledge through online groups and networks. Social media is internet-based and allows users to share anything quickly, including movies, images, documents, and personal information. Users interact with social media through web-based software or applications on a computer, tablet, or smartphone. Despite being widely used in America and Europe, Asia, particularly Indonesia, leads the world in social media usage. By October 2021, there will be more than 4.5 billion users of social media. Social media is a computer-based technology that makes it easier to share information, ideas, and thoughts by creating online communities and networks (Dollarhide, 2021).

Social media marketing

The practice of increasing website traffic or attention through social media platforms is known as "social media marketing." Social media marketing initiatives typically focus on efforts to provide content that grabs readers' interest and entices them to share it on social media. This type of marketing generates earned media as opposed to sponsored media when the underlying message goes from user to user and is assumed to resonate because it appears to come from a reliable third-party source rather than the brand or company itself. Social networking websites enable online interactions between people and organizations as well as the creation of communities and partnerships (Simerpreet, 2016).

Sales revenue

Sales revenue is the money a business makes from selling products or offering services. Sales and revenue can, and frequently are, used interchangeably to refer to the same thing in accounting. It is significant to remember that revenue does not

always equate to money received. One part of sales revenue may be paid in cash, and the other part may be paid on credit using methods like accounts receivable. Either the gross revenue total or the net revenue amount can be used to represent sales revenue on the income statement. All deductions for product returns, the potential for undelivered items, and the cost of uncollectible accounts receivables (also known as "bad debt expenditure," which appears on the balance sheet as the allowance for doubtful accounts) are included in net revenue (CFI Team, 2022).

Conceptualizing Social media Marketing for Promoting Sales

Social media marketing, also called online marketing, is the promotion of brands to connect with potential customers using the internet and other forms of social media communication. This includes not only email, social media, and web-based advertising, but also text and multimedia messages as a marketing channel (Bala & Verma, 2018). Online marketing is a new phenomenon that is starting to spread quickly and grow with the development of information communication technology (Kingsnorth, 2019). Its definition varies between specialists according to their views and backgrounds.

In this study social media marketing is the component of marketing that uses the Internet and online based social media technologies such as mobile telephony, website, email and social media marketing strategies to promote products and services (Hanlon, 2021).

However, social media marketing strategy is a plan that helps organization attain specific goals through carefully selected marketing channels such as paid, earned, and owned media (Chaffey & Ellis-Chadwick, 2019). On other hand social media marketing strategy is a set of planned actions performed online to reach specific business goals, this means performing consistent actions at the right time via the most suitable online channels to improve sales revenue and improve relationships with customers (Kingsnorth, 2019).

For the purpose of this study social media marketing strategy is a phenomenon characterized by the application of virtual internet models and means with all its benefits to the company's marketing. Normally, these strategies are simply a switch in the seller and buyer communication towards company's web page (Dewi, 2020).

Moreover, sales revenue defined as the revenue that comes from sales of product and services, while revenue includes income generated from things not directly related to the core business, such as income generated from interest on savings or cash paid out by dividends (Junaidi, 2020).

For the purpose of this study sales revenue is the income that a firm realizes from selling its products or services to the public resulting from social media marketing such as mobile telephony, website, email and social media marketing strategies. Usually, sales are the net sales that the firm achieves minus the cost of returned (Phiri, 2020).

Additionally, revenue from mobile services refers to retail revenue earned from the. Provision of mobile-cellular services, including all voice, SMS and data (narrowband. and broadband), offered by mobile operators (both network and virtual) providing. Services within the country during the financial year under review (Ituint 2014).

Resource Based Theory

Wernerfelt created the Resource Based View (RBV) theory in 1984. The idea evaluates and interprets an organization's resources to determine how it might gain a sustainable competitive advantage. The concept of difficult-to-imitate characteristics of the firm as sources of better performance and competitive advantage is the RBV's main point of emphasis (Barney, 1986; Hamel and Prahalad, 1996).

According to RBV, resources can be broadly defined to include assets, organizational processes, firm attributes, information, or knowledge controlled by the firm which can be used to conceive of and implement their strategies (Barney, 1991). According to Barney (1991) categories three types of resources: Physical

capital resources (physical, technological, plant and equipment), Human capital resources (training, experience, insights), and Organizational capital resources (formal structure).

RBV proponents contend that it is much more doable to take advantage of outside chances by employing already-existing resources in novel ways than it is to try to learn new skills for every opportunity. According to the RBV model, resources play a vital part in assisting businesses in achieving improved organizational performance.

Therefore, the theory was relevant to this study since it holds that, social media marketing strategies such as mobile phones, website, email and social media marketing represent as technological resources used as a marketing strategy by TTCL to improve sales revenue. Thus, social media marketing platform as a technological solution gives company capability which is used as competitive advantages.

Empirical review

In a review directed in Bahrain, Shafeeqa and Selwin (2014) found that Facebook, Twitter and WhatsApp not just upheld development and productivity; these media likewise changed the correspondence methodologies of SME's. In any case, the review brought up that Twitter didn't affect benefit since it is implied for the most part for news. The researchers exhorted that business people ought to track down ways of making Twitter more beneficial for businesses.

Wally & Koshy (2014) conducted a study about the use of instagram as a marketing tool by Emirati female entrepreneurs as an exploratory study. This exploratory study is aimed at understanding the experiences of Emirati businesswomen who chose Instagram to market their small businesses. Nine successful businesswomen were identified and their experiences were recorded during in-depth interviews and focus group sessions. The study found that Instagram is extensively used by Emirati women entrepreneurs, especially for home-based businesses.

Another study conducted by Adegbola *et al.* (2018) about the using instagram to engage with (potential) customers: a study of Forbes most valuable brands' use of instagram. The study reported that with over 800 million monthly users, instagram has become one of the most popular social networking sites utilized by individuals and businesses alike.

Nyambu (2017) explored the impact of social media marketing on performance of telecommunication firms' firms in Kenya using the case of Safaricom Ltd. The study found that social media enhanced the performance in terms of increase sales of the organization as it offers a stage for advertising at a cheaper cost contrasted with different types of marketing accessible. The study additionally settled that special promotional campaign boosted performance of telecommunication firms in Kenya as it expanded deals and income past the advancement time frame.

A study conducted by Bakhshizadeh *et al.* (2017) about eliciting value map of mobile instant message application users through laddering technique. The findings revealed that, Mobile instant messaging applications like Telegram, WhatsApp and Viber, are popular social media among users. Since using any media in marketing requires a precise knowledge.

In South Africa, Ukpere *et al.* (2014) uncovered that South African, Kenyan and Nigerian retailers are quick adjusting to the utilization of Facebook as a web based promoting stage for ads, and that the stage has the potential and significant correspondence capacity to reach out to both imminent and existing clients proficiently, really and on time. Along these lines, online entertainment stages are helpful vital advertising devices for business people.

Yasmin, Tasneem, and Fatema (2015) organized an investigation into the impact of various forms of online entertainment showcasing on business deals. According to the study's findings, social media marketing and rising sales are positively correlated. Additionally, it showed that social networking, email marketing, internet advertising, and search engine optimization all had a favorable impact on a company's sales.

In Tanzania, Kazungu *et al.* (2017) found that e-advertising is crucial for the Mediating techniques, for example, bringing down expenses of ICT offices and Web access costs by the Web access Suppliers, more help and drives by government on elevating and empowering SMEs to utilize e-promoting, instruction and preparing on ICT and e-showcasing for little administrators and making of shared gateways that will work with data sharing and systems administration among the business networks are among the suggestions of this review.

In order to ascertain how e-marketing affects the performance of SMEs in the manufacturing sector in Kenya, Njau and Karugu (2014) conducted a study. The study specifically attempted to analyze the effects of email marketing, online marketing, search engine marketing, and blog marketing on the performance of a SME. The results of the study showed that their social media marketing strategies, including blog marketing, search engine marketing, email marketing, and internet marketing, significantly impacted their sales performance.

Kazunguet *et al.* (2017) investigates the impediments to the adoption of electronic marketing among the Small and Medium Enterprises (SMEs) in Arusha, Tanzania. It looks at the extent of e- marketing utilization among small and medium enterprises; challenges facing SMEs in relation to the application of e-marketing and new strategies that would promote its adoption among the SMEs in the country. The study found that obstacles such as limited understanding of the potentials of e-marketing adoption, high cost of this technology adoption, inaccessibility of internet facilities and absence of regulatory framework to guide e-marketing were found to inhibit the adoption process.

According to Kanchanatane *et al.* (2014) from Thailand, clients may be discouraged from using e-showcasing for their prospective benefit due to the perception that online entertainment is not valued and a bad attitude toward e-promoting. Similarly, Werees (2012) discovered that respondents in Canada perceived their own lack of capacity and availability as a characteristic of the suppressing variables.

Farooq and Jan (2012) in Pakistan called attention to that albeit half of the respondents dealt with the overheads, they were worried that issues of protection and privacy between the associations and clients could be an obstacle to effective execution of virtual entertainment promoting.

A concentrate in South Africa by Ndlobo and Dhurup (2017) found that a couple of variables could repress firms from utilizing electronic showcasing, among which are: an absence of information about the capacities the stage could offer, innovation contradiction with the ideal interest group, the partner not being prepared to utilize e-promoting innovation, an absence of direction to, and misperception of web-based entertainment. Absence of information about the capacities online entertainment could propose to organizations could restrain their utilization of virtual entertainment advertising.

Methodology

The study was carried out in two TTCL commercial regions which are Dodoma and Mwanza. This is because these two regions have been fast-growing in population and thus the sales revenue, and in any business analysis Population is one of the important factors in revenue growth The corporation is selected because currently, the corporation established social media marketing strategies to improve sales revenue. Therefore, the required data for the study was achieved. The research is quantitatively designed and used a cross-sectional research strategy because it enables data collection at a single point and is useful when time and financial resources are limited for the researcher. The target populations for this study were employees from Tanzania Telecommunications Corporation (TTCL) because those employees participate in advertising company products and services through social media marketing strategies. The following below Table 1 shows the population distribution of Dodoma and Mwanza region.

The sample size for this study was fifty (50) respondents, chosen from a group of one hundred (105) commercial workers where by Dodoma 54 respondents

equivalent to 51.4% and 51 Respondents from Mwanza which is 48.6% of the selected respondents and from the study areas arrived through the use of Yammane formula.

$$n = \frac{N}{1 + N(e)^2} \dots\dots\dots (1)$$

Whereby; - n = Sample size, N = Targeted population, e = Level of precision or confidence interval that is 10%,

$$n = 105 / \{1 + 105 (0.1)^2\}$$

$$n = 50$$

The study included a sample of 50 respondents who were employees of TTCL in Dodoma and Mwanza regions. The study used simple random sampling to select Commercial employees from Selected TTCL Commercial Regions. The reason for using this technique is that simple random sampling was capable of providing equal opportunity for all employees to participate in the study. A structured questionnaire containing both closed- and open-ended questions was employed as a data collection tool. An online survey was used to gather quantitative data on commonly used social media marketing platforms for sales revenue in Tanzania Telecommunications Corporation. In this method, respondents were needed to mark answers, to questions and provide basic personal or demographic information. Therefore, this study used both open-ended and close-ended questionnaires that were used to ensure the reliability of information about commonly used social media marketing platforms on sales revenue in Tanzania Telecommunications Corporation.

The study adopted both inferential and descriptive statistics to analyze quantitative data from the survey that helps to identify the frequently used social media marketing strategy in TTCL and to assess the contribution of the frequently used social media marketing strategy on mobile sales revenue in TTCL. Data were presented in form of text and figures. In this study, the reliability of the research

instrument was measured through Cronbach's Alpha. This measures the overall consistency of the instrument (Cronbach, 1951). For a construct to be considered consistent, Cronbach's Alpha value should be 0.70 or above (Robinson *et al.* 2014).

Table 1: Overall reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.913	.921	25

Source: Fieldwork research (2022)

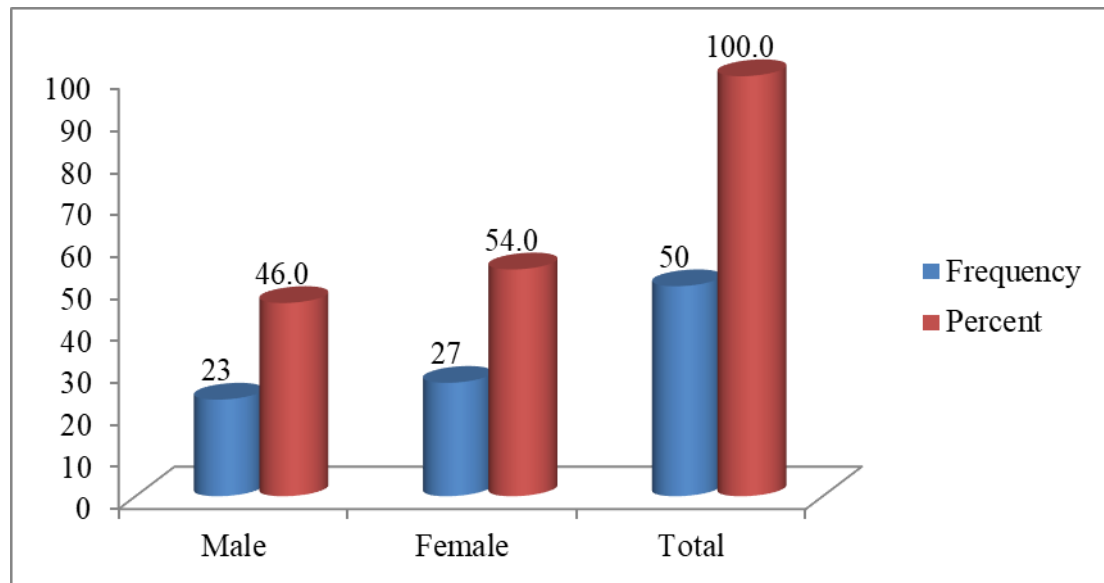
The findings as presented in Table 1 indicate the cronCronbach'ha of 0.913. These findings imply that there is internal consistency in the scale data used in this study. Therefore, the problem assessed was relevant and most reliable to be investigated.

Findings And Discussion

Commonly Used Social Media Marketing Platforms for Sales Revenue in Tanzania Telecommunications Corporation

Social Media Use in Gender

This study specifically assesses the commonly used social media platform in sales revenue. Among the survey respondents, 46% were men and 54% were female as presented in the figure below:

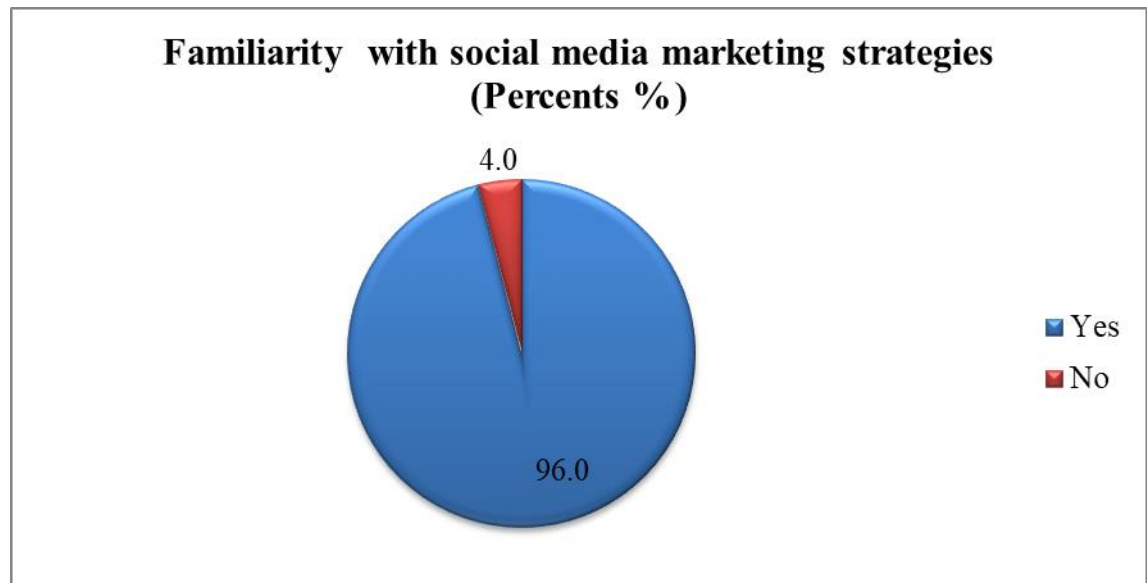


Source: Field data (2022)

These results imply that in social media marketing platforms, females are in the front line to use social media marketing strategies in comparison to males because are more likely to use online market than men. These results are similar with those of Anderson (2015) who revealed that, historically, women have been more avid users of social media than men. Therefore, females are the most user of social media marketing and thus are frontier in improving sales revenue more than men.

Social Media Marketing Strategies which is familiarity

The findings as show that majority of respondents about 96% are familiar with social media marketing strategies while few of them 4% are not familiar with social media marketing strategies as presented in the figure below:



Source: Field data (2022)

This implies that staffs of Tanzania Telecommunication Company are familiar with social media marketing strategies thus encourages them in the adoption towards sales revenue. The same findings were observed by Kumar & Moller (2018) who found that brand familiarity affects user persuasiveness in their adoption of social media.

Reasons for Using of Social Media as a Marketing Tool in TTCL

The findings show that the use of social media as marketing tool variables (to disseminate information, to create awareness about the company, to obtain information from customers, to improve sales revenue, and to promote a service or product).

The findings as demonstrated in Table 2 below revealed that dissemination of information is positively significant related to social media marketing platforms on sales revenues at $\beta = 0.496$ and $p \text{ value} = 0.000$. This implies that 1 unit of dissemination of information increases sales revenue as a market tool by 49.6%.

Also, the findings as illustrated in Table 2 revealed that the creation of awareness about the company is positively significantly related to social media marketing platforms on sales revenues at $\beta = 0.496$ and $p \text{ value} = 0.000$. This implies that 1 unit of creation of awareness about the company increases sales revenue as a market tool by 24.4%.

Furthermore, the findings as demonstrated in Table 2 below revealed that improving sales revenue is positively significantly related to social media marketing platforms on sales revenues at $\beta = 0.035$ and $p \text{ value} = 0.015$. This implies that, 1 unit of an idea of improving sales revenue through social increases sales revenue as a market tool by 49.6%.

Table 2: Reasons for Use of Social Media as a Marketing Tool in TTCL

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.461	.400		3.650	.001
To disseminate information	.496	.125	.653	3.962	.000
To create awareness about the company	.244	.059	.459	4.168	.000
To obtain information from customers	-.148	.071	-.352	-2.091	.042
To improve sales revenue	.035	.042	.085	.824	.015
To promote service/ product	-.053	.036	-.149	-1.452	.154

Source: Fieldwork Research (2022)

The Social Media Marketing Tools according to usage

When respondents were asked to rate the social media marketing tools according to usage, The results of the study showed that Instagram is the social media marketing

platform that contributes most to sales income, whereas Twitter is favorably significant but unrelated to TTCL's sales revenue as indicated in table 3 below.

The findings as demonstrated in Table 3 below revealed that Instagram is highly significantly related as a social media marketing platform to sales revenues at $\beta = 0.251$ and p value= 0.046. This implies that 1 unit of Instagram increases sales revenue as a marketing platform by 25.1%.

Also, the findings as illustrated in Table 3 below revealed that Facebook is significantly related as a social media marketing platform to sales revenues at $\beta = 0.234$ and p value= 0.026. This implies that 1 unit of Facebook increases sales revenue as a marketing platform by 23.4%.

Table 3: The Commonly Used Social Media Marketing Strategy

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.034	.272		3.794	.000
Facebook	.234	.101	.381	2.308	.026
Twitter	.053	.103	.085	.512	.611
Instagram	.251	.123	.384	2.052	.046
WhatsApp	.204	.129	.294	1.584	.120

Source: Fieldwork research (2022)

This result implies that Instagram is the most social media marketing strategy that the Tanzania Telecommunications Corporation uses to engage with customers thus to increase its sales volume. These results are similar to those of Adebola *et al* (2018) who reported that with over 800 million monthly users; Instagram has become one of the most popular social networking sites utilized by individuals and

businesses alike. Likewise, Wally & Koshy (2014) supported these findings by adding that Instagram is extensively used by Emirati women entrepreneurs, especially for home-based businesses.

Therefore, Instagram is used as a technological resource to the businesses purpose for instance applying marketing programs made by Tanzania Telecommunication Corporation. These results were explained and added value in this study by Resource Based View (RBV) theory which was developed by Wernerfelt in 1984. The theory holds that social media marketing strategies such as mobile phones, website, email, and social media marketing represent technological resources used as a marketing strategy by TTCL.

However, Twitter is last commonly used marketing strategy ranked by the Tanzania Telecommunications Corporation. Therefore, depends on Twitter for marketing your products you are much in risks more than using other marketing strategies to announce your products or services. Also, the qualitative findings from key informants revealed that, the Tanzania Telecommunications Corporation use Twitter to post only messages that educates the users about the products or services. So is to say even though it's a last commonly used marketing strategy but it's a supportive to the small part of the customers in all social media marketing strategies.

Furthermore, these results were explained and added value in this study by Resource Based View (RBV) theory which was developed by Wernerfelt in 1984. The theory holds that, social media marketing strategies such as mobile phones, website, email and social media marketing represent as technological resources used as a marketing strategy by TTCL to improve sales revenue. Therefore, in this context Twitter is used as a technological resource to market the Tanzania Telecommunication Corporation products or services.

The extent to which TTCL engages in the following activities when advertising on Social Media

The findings as demonstrated in Table 4 below revealed that engagement with customers is positively significant related to advertising using social media marketing platforms on sales revenues at $\beta = 0.268$ and p value = 0.000. This implies that 1 unit of engagement with customers increases advertising using social media marketing platforms on sales revenues sales revenue by 26.8%.

Also, the findings as demonstrated in Table 4 below revealed that monitoring what customers are saying online is positively significantly related to advertising using social media marketing platforms on sales revenues at $\beta = 0.281$ and p value = 0.000. This implies that, 1 unit of monitoring what customers are saying online increases advertising using social media marketing platforms on sales revenue by 28.1%.

Furthermore, the findings as demonstrated in Table 4 below revealed that get feedback from the customers is positively significant related to advertising using social media marketing platforms on sales revenues at $\beta = 0.203$ and p value = 0.000. This implies that 1 unit of get feedback from the customers increases advertising using social media marketing platforms on sales revenues sales revenue by 20.3%.

Table 4: The extent to which TTCL engages in advertisement through social media

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.074	.309		3.478	.001
Engage with customers	.268	.035	.536	7.667	.000
Monitor what customers are saying online	.281	.038	.537	7.301	.000

Learn more about your customers	.005	.047	.006	.106	.916
Get feedback from the customers	.203	.058	.267	3.493	.001
Respond to customers need	-.033	.038	-.058	-.858	.396

Source: Fieldwork research (2022)

Conclusion And Recommendations

Conclusion

Since Instagram is the social media marketing approach that contributes the most to sales profits, the majority of TTCL's income comes from advertisements and other marketing strategies used on its Instagram account. Therefore, the performance of TTCL in marketing is highly facilitated by the performance of their Instagram account in making the visibility and availability of their services and products. However, the cooperation needs to accompany other strategies like Facebook and WhatsApp in order to acquire other customers who do not prefer to use the Instagram account.

Recommendations

The study advises Tanzania Telecommunications Corporation (TTCL) to engage with other telecommunications companies and the government to implement the use of the 5G network in order to strengthen the network and hence enhance sales volume. Also, the study suggests the introduction of a few policies that will stress users' use of social media marketing tactics in order to boost sales volume. Furthermore, the study's last recommendation is for Tanzania's parliament and ministry of constitution and law to pass strong legislation targeting hackers and social media marketers who act morally online.

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The Influence of Revenue Collection Strategies on The Collection of Revenues in Dodoma City Council, Tanzania.

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Abstract

The purpose of this study was to gauge the contribution of the Local Government Revenue Collection Information System to the degree that own source revenue collection is concerned. Specifically, to assess the influence of revenue collection strategies on the collection of revenues in DCC. The study implemented a cross-sectional design to meet the objective and data were collected through Questionnaires, Interviews and Documentation review by involving a sample size of 50 respondents categorized into customers and employees of the Dodoma City Council which were randomly selected with the exception of key informants who were purposively chosen to supplement the findings. The study concluded that, the LGRCIS and special task force significantly contributed to the increase of the revenue collected since its adoption at the city council of Dodoma whereby the generated control numbers and POS machines to a great extent had been effective and influential in the revenue collected. The study recommended on few concerns like strengthening the network provided for LGRCIS for effective and efficient implementation, emphasis on system training to special task forces and the Ministry of PO-RALG and TRA should emphasize education on the importance of tax payment to the population.

Keywords: *Local Government Revenue System, Revenue, Special Task Force, Strategies.*

Introduction

Dodoma Region was declared the National Capital under The Presidential Decree No.320 of 1973. In 1980, Dodoma Municipal Council was established and in 1995 the Government decided that all parliamentary activities should take place in Dodoma and as a result The Tanzania National Assembly moved to Dodoma, in February 1996 and in April 2018, the late former President Dr. John Pombe Magufuli publicized to be the City Council of Dodoma.

The government headquarters shift from Dar es Salaam to Dodoma came into reality after many years in planning. The delay took long time as the relocation of Tanzania's capital from Dar es Salaam to Dodoma was planned 43 years ago, being the influence of the first President of the country Mwalimu Julius Kambarage Nyerere. Nonetheless, the executives that took over put on hold the plan up until July 23, 2016, when the Late President Dr. John Pombe Magufuli ordered to all Government Ministries and Corporations to straight away move to Dodoma. Among the first responders was the Ministry of PO-RALG. As the President announced this transfer, he issued an executive order, directing the government to move its seat to Dodoma within his first term as occupant of the country's highest office (Tanzania Daily News, 8 November 2018).

Thus, with the internal migration of government offices, like many other offices the Local government authorities needed finance for the purpose of running its major activities which will develop the establishment of better services to the public and to guarantee that they are properly used. With a wide variety of services being provided by the Local Government Authority in Dodoma to the public includes Education, Health, Infrastructure, Control and improvement of agricultural sector, finance and trade services, environmental conservation, and construction of well-structured sewage system along the residential areas etc. Therefore, the Dodoma City Council needed to raise revenues to keep up with the increase in demand from the people to ensure a good flow of services being provided to the public when required.

Collecting revenue transparently and efficiently has been a challenge for local governments in Tanzania. Local government authorities (LGAs) use “own source revenue” (OSR) such as taxes, fees or licenses to fund operational and development activities to supplement what they receive from the central budget. To help make local revenue collection easier and more transparent for citizens and LGAs alike, USAID through the Public Sector Systems Strengthening Project (PS3), in partnership with the GOT and the World Bank developed and implemented a new LGRCIS. (Chilton & Jackson, 2021)

LGRCIS helped to boost the productivity and effectiveness of the revenue collection strategies thus increase the overall revenues of Local Government Authorities including the Dodoma City Council.

For years since its implementation, the LGRCIS has become an integral part in the collection of revenues from Levies from Business activities, Fines, Sale of Lands, Issuance of licenses etc. All fees licensed granted within the area of the district Councils under the business Licensing Act 1972. This point lies in the fact that the extent to which the City Council can provide the needed goods and services to the people is a function of whether they have an adequate cash flows and financial liquidity position all year around. All of these depend on wards capacity to collect the estimated revenue from its various sources. (Business act,1972).

LGAs collect satisfactory income which could be used to finance the city social services development projects and programs, defense and security and other national and international issues within the ward such as environmental regeneration, meaning that all money resulting from any trade, industry, works services or undertaking carried on or owned by the City Council can be injected directly into various investments both of short term and long-term origin.

This main reason for this study was designed to conduct an assessment on how the LGRCIS backs the city council when it comes to the collection of revenues in the region and to what extent does the system alleviate the burden of strategies and policies imposed by the city council for effective and efficient revenue collection and control.

Statement of the Problem

The Local Government Authorities of Dodoma Municipality and now a city has for many years been facing various challenges of which contributed to dull performances when it comes to revenues collected from their own sources while the overall cost of services has been at an increasing proportion continuously. It is well familiar that these LGAs in Tanzania face significant trials in the categories of revenue management, which includes revenue collection, budgeting, internal audits and general issues around accountability and transparency within the whole cycle of revenue management (McCluskey and Franzsen 2005; Fjeldstad and Katera 2017).

In the past, tax revenue was recorded in a paper-based that was separate from budgets and accounting for expenditures, making it difficult for LGA management to quickly obtain a clear picture of their financial situation. To alleviate this issue, PS3 worked with the GOT to enhance and scale the LGCRIS system so that it can be used on a wide scale of revenue collection points and exchange information with other LGA public financial management systems – including the LGA planning, budgeting system (PlanRep), and accounting system (Epicor). (Chilton & Jackson, 2021)

But, with all the goods associated with the incorporation of LGRCIS in the Dodoma city council's own source revenue collection activities, there are several hindering factors of which largely play part in diminishing the effectiveness of the system, thus making it look obsolete when in reality if it's applied adequately is one of the best systems that can lead to the city council to successfully improve its performance in the scope of revenue collection.

As a consequence of inadequate revenue collections which led to the failure on reaching the projected revenue estimates, the council failed to meet its financial obligations, other development and recurring expenses hence forth the pattern of reliance of the City Council in the Central Government is still a necessity. The funding obtained seems not managing to pay for the schemes, activities, and requirements of city council in solving the problems facing the community hence the need for local revenue.

A number of researches have been done in Tanzania on the performance of revenue

collection in LGAs. The studies point out that poor revenue collections are due to managerial ineffectiveness, inexperienced personnel, corruption, and poor plans and policies (Kaongo, 2015); (Nuluva, 2015). To address the situation, some studies have advocated that ICT and e-payment will have an effect on the effectiveness and efficiency in operational performance (Sanga, 2015); increase monthly revenue returns (Mohamed, 2015); reduce administrative and collection costs, and increase transparency (Chatama, 2013)

With all the goods associated with the incorporation of LGRCIS in the Dodoma city council's own source revenue collection activities, there are several hindering factors of which largely play part in diminishing the effectiveness of the system, and as the result various aspects such as corruption between staffs and customers, poor strategy formulation and implementation, low capacity utilization of both human and non-human resources tend to be the biggest contributing factors among others leading to the adversity of the revenue system throughout its tenure.

The Objectives of this study were to:

- i. Determine the contribution of special task force on the collection of revenues in Dodoma City Council, Tanzania.

The Rationale of the study

The study provides effective recommendation to the Dodoma city council and the solutions on how it can improve its performances of which would mean higher collected revenues from its diverse sources. The work will also provide a walkthrough which can be used by other intellects to gain extra knowledge on how the implemented system of revenue collection is being an integral part of the Dodoma city council's strategies and plans of which are the backbone of the council's ever-growing revenues. It will also allow the central government when it comes to the allocation of funds through effective utilization of funds in local authorities and be able to identify challenges which play part in disturbing the performances of Local Government Authorities. With the background it is the researcher's expectations that this study will be of the significance in assisting other researchers who are interested in conducting study on a comparable scope in terms

of the contribution of LGRCIS and Strategies in the collection of revenues in Dodoma city council or any other Local government authorities in different regions.

Definition of Key Terms

Local Government Revenue System, the ability of LGAs to assemble revenues is very essential to their financial sustainability and their ability to encourage the well-being of their local communities.

Revenues from Exchange and Non-Exchange Transactions, is referred to the money which comes from person or government from any sources especially the money comes to a government from taxes for example property and shares (Joseph, 2008).

Special task force, refers to a strategic group or committee which usually contains experts or specialists, formed for analyzing, investigating, or solving a specific problem (Jouda *et al.*, 2016).

Strategies in this study are the general plans to achieve one or more long-term or overall goals under conditions of uncertainty.

Literature Review

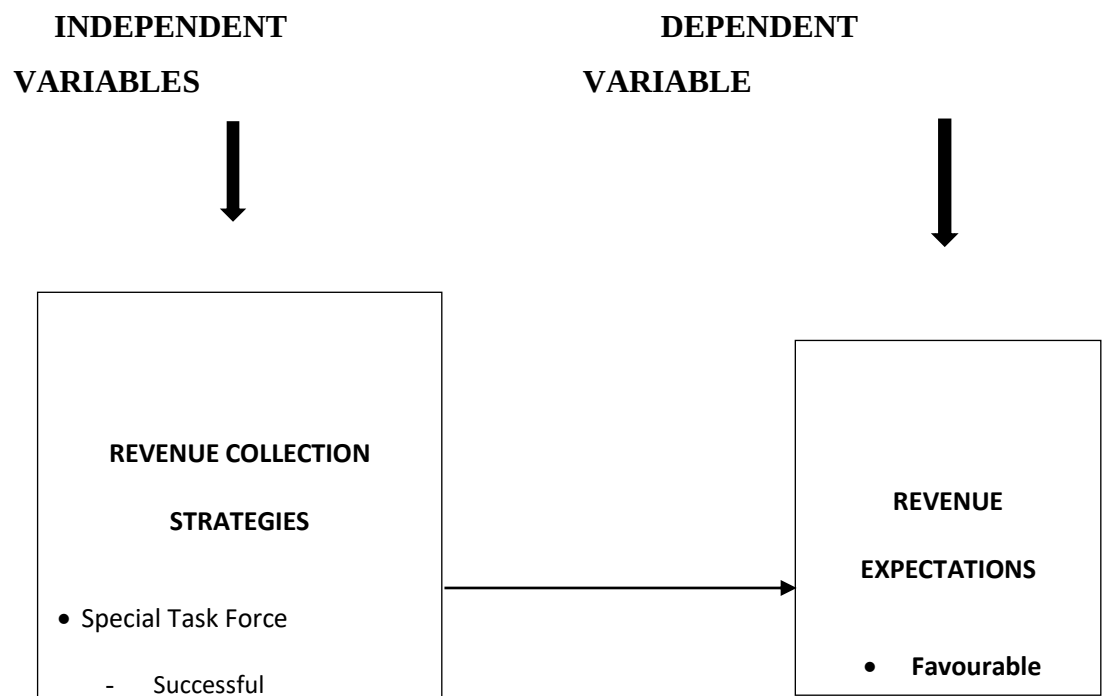
A few studies have been conducted in relation to revenue collection and the contribution of technological advancements to the collection of revenues both locally and globally. Among the early studies conducted is The Technology Acceptance Model (Davis, F 1989). This is an information systems theory that models how users of a system come to accept and use a new technology. The model proposes that when users are presented with a new technology, several factors tend to influence their decision about how and when they will use it.

Later in years came to light another argument that that because new technologies such as personal computers are complex and an element of uncertainty exists in the minds of decision makers with respect to the successful adoption of them, people form attitudes and intentions toward trying to learn to use the new technology prior to initiating efforts directed at using. (Bagozzi, D & Warshaw 2007). Thus, there have been some critics from various scholars on the applicability of this theory in the ever-dynamic environment of the 21st Century.

It is also anticipated that as the information management of organizations attains maturity, information formality is likely to be promoted (Ajibade, 2018). Hence, there will be a well-establish process within the organization and rules to use an Information Systems that is provided by the organization. One of the arguments of this paper is to point out that, the way in which a system is used may be determined by the strategies of the organization and not on the personal intention of the employees (Ajibade, 2018).

Therefore, the perceptions of users of the practicality of the technology and the ease with which it can be used are likely to be formed once users have familiarized themselves with the systems. Later some improvements were done to try to make weight of the preliminary theory of Technology Acceptance Model and Unified theory of acceptance and use of technology theory was developed by Venkatesh et al. (2003). This was an attempt to solve the weaknesses of which had been associated with the TAM

Figure 1: Theoretical framework



Source: Researchers understanding on Theoretical and Empirical Literature review, (2022)

Methodology

Study design: A cross sectional design was inducted to make possible the collection of data at a single point in time once in the selected area, through asking questions and interviewing the respective sample of the population because it captures a specific point in time, so it saves time. It involves observing data from a population at one specific point in time; the participant is selected based on variable interest.

Types of data and Sources: Both primary and secondary data was collected. The key informants among others were City Director, City's Finance and Trade department personnel's, City's ICT department personnel's and customers of the DCC will be sources of both primary and secondary data for the research work.

Data collection methods:

Interviews;

In collecting primary data, I used interview to gather important data directly from the key informants whom where the City Director, City Treasurer and The Head of ICT unit. Both structured and unstructured interview were applied. The interview was conducted to all respondents by using tool of interview schedule and checklist.

Questionnaire;

In this method, a questionnaire was used as a tool. This consisted of several questions printed/typed in a definite order on a form or set of forms. The questionnaires were sent to the respondents who were expected to read and write down, reply on their own both employees of the organization and their customers. The researcher used structured questionnaire during his study. Both closed questionnaires and open questionnaires (inviting free response) were used. Questionnaires were addressed by all type of respondents.

Documentary review;

This included written documents of the organization including financial reports, administrative and public records, and CAG reports. The researcher used documentary review to obtain some other secondary data necessary to answer research questions which include revenue collection and operation performance. The researcher used all written documents such as administrative records, books and journal which is one way or another help to answer research questions.

Sampling:

Sampling Frame;

The sample frame involved all parties who are both operating inside the City council meaning the employees and the people outside the organization of whom are mainly the City's customers as both parties play a major role when it comes to the collection of revenues.

Sampling Units

The sampling units of the study were mainly the City's Finance and Trade department employees, City's ICT department employees and other members of the Councils staff and also customers of the organization were included (some of which are business owners, local traders, outsourced agents etc.).

Sample Size

The sample size was obtained through the following formula (Yamane, 1967)

$$n = \frac{N}{1+N(e)^2}$$

Whereby.

N = sample size

N = population size (N=100)

e = Level of significance (10%)

$$n = \frac{100}{1 + 100(0.1)^2} = 50$$

A total number of 50 respondents were sampled for the study from the total sample in a study area.

Sampling Procedures

A stratified sampling technique was used to classify the groups of employees in terms of professions and departments, while Purposive sampling was used to select key informants including the City Director, City Treasurer and the Head of ICT unit. And on the case of customers a mere random sampling was used in the selection of the 31 respondents.

Data analysis techniques: This study employed descriptive statistics on data analysis. Quantitative data collected were analysed by using frequencies and percentages. Qualitative data were analysed by using content analysis. This helped to give a summary of each topic discussed and identified the content of discussion. Descriptive analysis was also employed to provide the best results of findings. Also trend analysis of three consecutive years was applied in objective two to determine the effective performance of LGRCIS since its establishment.

Results

Results on revenue collection strategies on the collection of revenues in Dodoma City Council, Tanzania.

The city council of Dodoma has been using different methods and or strategies in revenue collection before the adoption of the LGRCIS system. Therefore, this study specifically sought to assess how LGRCIS affected the revenue collection process in terms of effectiveness in comparison with other methods or strategies as well as the associated challenges or problems in the implementation.

Effectiveness on the methods of revenue collection strategies

The study examined the most effective method or strategy of revenue collection among different methods which the city council has ever adopted. Among the methods, LGRCIS was viewed as the best method of revenue collection among all the methods 40 (80%). These findings complied with those of William et al., (2020) who stated that LGRCIS in the Arusha City Council could provide an excellent platform to collect own source revenue more efficiently and effectively. The other method was a special task force of 6 (12%) well-trained individuals for revenue collection. The traditional method was deemed not good as very few 4 (8%) suggested it as being effective. The results are shown in Table 1.

Table 1: Effective revenue collection method at the City Council of Dodoma (n=50)

Attributes	Frequency	Percent (%)
Traditional Method	4	8
LGRCIS	40	80
Special Taskforce	6	12

Source: Field data, 2022

Discussions

Research by Kessy, (2019) suggested that there is a need for LGAs to have various strategies such as the traditional method, a strong revenue collection system and a special task force. Kessy, (2019) added that, if those strategies are adopted and managed well and more seriously, there will be positive responses in tax payment and there will be no evasion of any kind.

Furthermore, the study of Binyaruka et al., (2017) further explained that special task forces are specialized groups that prevent tax evasion, because these groups follow directly and in the relevant areas all clients who are also tax payers. The right power

to be used in the management of these groups is to enable them to use the best means of transportation to reach the taxpayers more quickly.

Binyaruka et al., (2017) explained more about the solid system of revenue collection. The LGRCIS system is a user-friendly system that brings transparency to payers and administrators. The strong management of the system brings and increases more income according to the fact that it does not have a big bureaucracy but you need to follow the way it was designed

Moreover, Binyaruka et al., (2017) explained more on the traditional methods that are used in the collection of revenue. Binyaruka et al., (2017) analyzed that, traditional methods refer to those methods of filing and serving documents, other than electronic filing, provided under statutes and local rules.

Binyaruka et al., (2017) added that, collecting taxes and fees using a specific designed system is a fundamental way for countries to generate public revenues that make it possible to finance investments in human capital, infrastructure, and the provision of services for citizens and businesses. There is a need to ensure that the tax system is fair and equitable. Governments need to balance goals such as increased revenue mobilization, sustainable growth, and reduced compliance costs with ensuring that the tax system is fair and equitable. Fairness considerations include the relative taxation of the poor and the rich; corporate and individual taxpayers; cities and rural areas; formal and informal sectors, labor and investment income; and the older and the younger generations.

The results of this study are similar to all the studies conducted by Binyaruka et al., (2017) and Kessy, (2019) Because it is clear that the adoption of various strategies leads to pushing the LGRCIS system faster and more strongly. Because without the payers showing up and paying on time and at the right time, then it would lead to the system being meaningless. Therefore, the life of the system is for customers to pay their debts by following and observing it.

Clarity about the effective revenue collection method at the city council of Dodoma was given and emphasized by the two most top position officials of the council who responded that:

... *“Strategies imposed by the council cope very well with*

the LGRCIS, thus ensuring maximum effectiveness in revenue collection of all the existing sources” ... (The City Council Director, June 2022)

... “With the help of revenue strategies, the LGRCIS has thrived for years in the attempt of boosting revenues in a more effective way rather than the pre-LGRCIS era” ... (The City Council Treasurer, June 2022).

The trend of revenue collection (2019 – 2021)

The study also examined the trend of revenue collected by LGRCIS system from about three years back. The general trend seemed to fluctuate although in 2019 the revenue collected was at the highest level than the other next two years whereby in 2020 the revenue decreased sharply but with a reasonable increase of revenue in the last year 2021. In all three years, a large amount of revenue at the city council of Dodoma was sourced from receipts or sales of land and other assets followed by other uncategorized sources like building permits, pre-payment, advertisement and entertainment, telecom tower revenue, own sources and hire of vehicles. Also, different types of levies like the Service levy and Hotel levy contributed significantly to the revenue collected.

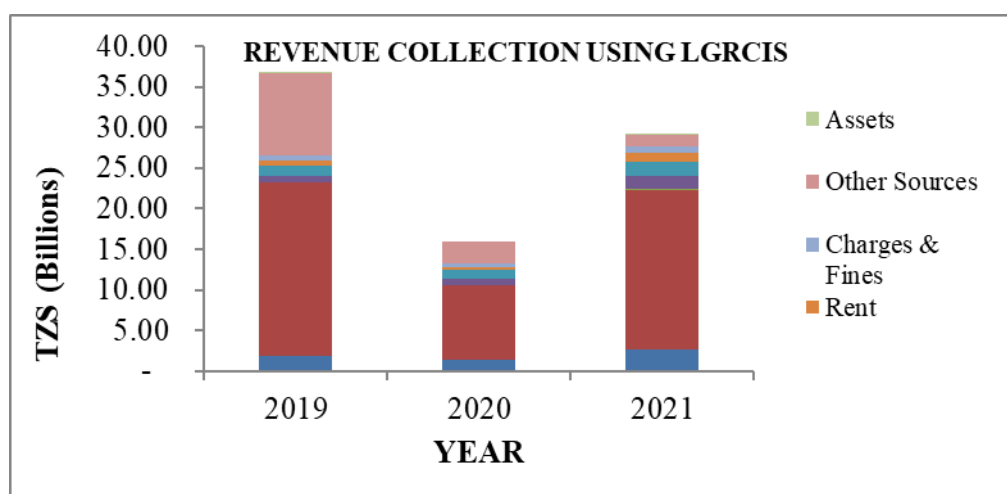


Figure 2: The Trend of revenue collection (2019 – 2021)

Source: Field data, 2022

Conclusion And Recommendations

Conclusion

On the context of assessing the influence of revenue collection strategies on the collection of revenues in Dodoma City Council. Descriptive analysis was used to analyze the strategies that were implemented by the Dodoma City Council. Three strategies which were traditional methods, LGRCIS system use and special task force were identified to contribute positively in the collection of revenues in Dodoma City Council.

Recommendations

Based on the findings, this study recommends the following

- i. Local Government Authorities should strengthen the network provided for the LGRCIS system so as to ensure even more revenue or a higher level of effectiveness and efficiency in its implementation.
- ii. Dodoma City Council authority should engage fully in routine training on the system to the tax collector for best revenue collection and;
- iii. The Ministry for RALG and (TRA) should emphasize and strengthen the education on the importance of tax and tirelessly provide to the taxpayers in order to have a tax-literate population which in turn will make the revenue collection process easy.

Areas for further study

Another study has to be conducted at the City Council Dodoma to determine the factors which caused a sharp decrease in the revenue collected in the second year (2020) of LGRCIS system implementation compared to other periods

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**The Effect of Personnel's Capability in achieving Value for Money
under Force Account Project in Local Government Authorities: A
case of Kondoa District Council**

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Abstract

The main objective of this study was to assess the effect of capability of personnel in achieving value for money under force account project in local Government Authorities. Explanatory sequential mixed method design was used and respondents were obtained by using purposive sampling technique and stratified sampling technique. The study employed a questionnaire and interview guide as data collection instruments whereby quantitative data were analyzed by using descriptive statistics in form of mean and inferential statistics using regression model while qualitative data were analyzed by using content analysis technique. The findings showed that personnel's capability has a positive significant effect on achieving value for money. The general finding of this study indicate that study variables were positively affecting achievement of Value for Money under force account method. The study recommended to the management to employ experienced, skilled personnel and provision of regular training to staff on force account method to make effective supervision of the project by using relevant and competent personnel in force account project.

Keyword: Personnel's capability, Force Account, Value for Money

Introduction

Force Account (FA) mechanism is a means of undertaking works using its own personnel and equipment (PPDA, 2014). According to Tekka, (2017) force account method involves the use of the labor, equipment and machinery for the government or public or semi-public to undertake the tasks intended. The use of force account

method in Local Government has greatly increased in 2017 following a great savings in construction projects that were implemented under force account method in Tanzania. For example, it was reported that in the project which implemented by using Force Account it spent one billion Tanzania Shillings while the same project that was implemented by using a contractor used an average of two to three billion Tanzania Shillings (URT, 2017). The use of force account procurement method plays significant functions among many procuring entities in achievement of Value for Money, because it creates employment, cost saving and its impact in national economy (Lusupi, 2020). However, Force account operations have faced several challenges including lack of financial discipline particularly cost overruns which leads into inefficiency and ineffectiveness as major indicators of value for money. (Stock & Jan de Veen, 1996). Implementation of force account method require good planning, supervision, high standards of staffing, quality control and routine reporting systems (Munters 2003)

In Uganda, a review of procurement audit reports for the financial year 2015/16 revealed that, 40% of the audited procurements conducted under Force Account were rated unsatisfactory. The reasons for the poor performance included anomalies in the procurement of the inputs, delays in executing the works, anomalies in contract management and lack of accountabilities for force account activities. in Tanzania PPRA report for financial year 2018-2019 on project under force account show that, among 131 projects which was audited 39 projects equivalent to 30% were found poor; also, it was reported that several LGAs had inadequate number of qualified personnel such as Engineers, Quantity Surveyors, and Technicians for effective supervision of construction projects, as a result most projects are inadequately supervised and consequently led to substandard projects which do not reflect value for money (URT, 2019).

Literature Review

Personnel Capability

Boyatzis (2008) defines Personnel capability as capability, ability or underlying characteristics of an individual which is casually related to effective or superior performance. Kaesi (2011). According to Ekwoaba, Ikeije, & Ufoma, (2015), personnel (people) are fixed capitals just like machine because they have skills and useful abilities that has genuine cost and yields profits. People are vital to organizations as they offer perspectives, values and attributes to organizational life; and when managed effectively, these human traits can be of considerable benefits to the organization. People and their collective skills, abilities and experience, coupled with their ability to deploy these in the interests of the employing organization, are now recognized as making a significant contribution to organizational success and also constituting a significant source of competitive advantage (Armstrong, 2006).

Force Account

Force account is the procurement method made under regulation 167 of the Public Procurement regulation. The Public Procurement Regulations defines force account as a construction by the procuring entity itself or use of public or semi-public agencies or departments concerned, where procuring entity or the public or semi-public agency uses its own personnel and or hired labor (URT, 2013).

Value for Money

The Value for Money (VFM) means the maximum benefit from goods, works or services procured with the resources available worth the cost incurred (URT, 2016).

Fleming (2013), define VFM is a matter of debate, which includes the following elements in its assessments: Economy less cost, while bearing in mind quality, effectively: achieving outputs for inputs, while bearing in mind quality and Effectiveness: achieving program outcome, while bearing in mind quality.

Theoretical Literature Review

Resource Dependence Theory developed by Johnson Jr, 1995 is a theory of organization (s) that tries to describe organizational and inter-organizational conduct in terms of those important resources which an organization should have in order to survive and function. As an open-systems theory, the resource dependence proposes that a particular organization will respond to and become reliant on those organizations in its environment that control resources which are both critical to its operations and over which it has limited control. Such dependence makes the external constraint and control of organizational behavior possible as asymmetrical exchange and power relations are created between organizations. In an attempt to maximize organizational autonomy, organizational leaders use a variety of strategies to manage these external constraints and dependencies. Resource dependence theory thus focus on the following: resources; the flow or exchange of resources between organizations; those dependencies and power differentials created as a result of unequal resource exchange; the constraining effects such dependence has on organizational action; and the efforts by organizational leaders to manage dependence. With its emphasis on resource exchange, resource dependence represents a political economy model of organizational and inter-organizational behavior (Johnson Jr, 1995). For an organization to conduct Force account efficiently and achieve Value for money, it should possess sufficient own resources such as adequate Personnel with capabilities, such as skills proper trained and experience in Force account projects execution. Personnel Capabilities is important for smooth running and implementation of the Force Account project.

Empirical literature review

Ndyanabo, (2020) evaluate the effectiveness of force account method in construction project in local government authorities. The study used primary data for the sample size of 174 comprises council staffs and committee members selected using stratified sampling technique. the study revealed the encounter during implementation of force account including shortage of staff, unavailability of local skilled labour and material dealers.

Mayani (2019) assessed the influence of force accounts in achieving value for money in construction works. Value for money is measured or indicated through three economic, efficiency, and effectiveness measures. The study was conducted at Bariadi Town Council. The study found a relatively significant influence of organization personnel and project management on Value for Money in the construction of public buildings. Fund from implementing Procuring entity has a low significant influence on value for money in construction works.

Empirical studies cover many parts of the force account procurement approach and the effectiveness of works. Such parts include evaluate the effectiveness of force account method in construction project through, the influence of force accounts in achieving value for money in construction works. This study focused on factors affecting achievement of Value for Money in construction project under Force Account method. Finally, suggested how to improve and increase Value for Money on works in the force account method.

Objectives

The main objective of this study is to explore how personnel Capabilities affect Achievement of Value for Money under Force account projects. This findings of the study will be useful to the Local Government Authorities to improve in the execution of force account projects.

Methodology

This study employed explanatory sequential mixed method whereby in the first case quantitative data were analyzed and then the researcher went again in the field to collect qualitative data from key informants. The aim was to seek more clarification of quantitative data obtained from the questionnaires. The purpose of using explanatory sequential mixed method was to ensure data triangulation (Creswell, 2014).The population of study included staff and Local ‘Fundi’ from Kondoa District Council.

Sampling technique

Sample size for this research included 136 respondents that were approached by using purposive and stratified sampling technique. Whereby purposive sampling used for selection of different departments such as Engineers, PMU, Accountant, , Teachers, Planning departments, Human resources and Local “fundi”. Respondents departments were divided into strata base on their proportional then the respondent from stratum were selected proportionally whereby from each group sample were selected randomly to form the sample. Stratified sampling safeguard the study from having one sided sample (Saunders, 2002).

According to Saunders, (2011), the sample size is calculated using the following formula:

Where n = sample size,

N = Population size =

e = Margin of error =5%

Whereby the sample unit for each section/department was obtained using the following formula :

$$\text{Sample unit from each section} = \frac{\text{Number of units in the section}}{\text{Total number units from all sections}}$$

Total number units from all sections

Table 54: Sample size

Section/Department/Personnel	Population	Sample
Engineers	07	$7/206 \times 136 = 5$
PMU	08	$8/206 \times 136 = 6$
Accountant	05	$5/206 \times 136 = 3$
Local “fundi”	96	$96/206 \times 136 = 63$
Teacher	80	$80/206 \times 136 = 53$
Planning	05	$5/206 \times 136 = 3$
Human resources	05	$5/206 \times 136 = 3$
Total	206	136

Data collection methods

Primary Data were collected using questionnaires and interview. The questionnaire guide was the structured questionnaire was distributed to the Local fundi, accountant, member of PMU, Teachers, engineers, planning officers and human resource officers. This was the document containing a list of questions tailored to each research objective. Also unstructured interviews were conducted with engineers, procurement officers, “local fundi,” and teachers. By which the

interview for human resource officers, procurement officers and teacher was conducted at the office and interview for engineers and local Fundi was conducted direct to the field.

Data analysis

Quantitative data were analyzed using descriptive statistics and inferential statistics through regression model while qualitative data collected from key informants were analyzed using content analysis. The reliability of the study was examined using Cronbach's Alpha. Cronbach alpha was used to determine the internal consistency or the average correlation of the elements in an investigation tool to measure their reliability, taking into account an alpha threshold of 0.7 to demonstrate that the questionnaire is reliable. Table 1 indicates that the Cronbach's alpha values ranges from 0.574 to 0.852 which shows that the data used in this study are reliable.

Reliability for Personnel competencies

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.739	4

Table 3: Item-Total Statistics

	Scale Mean if Deleted	Scale Variance if Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Deleted
Personnel competencies	6.8458	4.030	.159	.852
Skills	6.9254	2.847	.704	.588

Personnel experience	6.9726	2.488	.693	.574
Training of staff	6.9353	2.606	.634	.615

Results And Discussion

A five-point Likert scale with a mean range of 1 to 5 was used. The interpretation was that a mean ranging from 1 to 2 means that, Personnel experience, Training, skilled Labor and Personnel competencies has a low effect on the value for money, and a mean ranging from 2 to 3 means that Personnel experience, Training, skilled Labor and Personnel competencies has a fair or moderate effect on the value for money, and a mean ranging from 4 to 5 means that Personnel experience, Training, skilled Labor and Personnel competencies have a high effect on the value for money.

The results shown in the table below show an average mean of 4.25 and a standard deviation of 0.44

Table 4: personnel capability affects achievement of Value For Money

Statements	Mean	Std.
Personnel experience	4.23	.459
Lack of Training	4.33	.475
lack of skilled Labor	4.20	.465
Personnel competencies	4.23	.372
Average	4.25	.44

The following analysis in table 4 analyzes if personnel experience, Lack of Training, lack of skilled Labor and Personnel competencies in force accounting affects the achievement of value for money. The analysis shows average of 4.23 of respondents agree that the personnel experience in force accounting affects achievement of value of money. also The analysis in Table 4 analyses the lack of training on Force account to the workers in an organization affect achievement of Value for Money an average of 4.33 show that respondents strongly agreed that lack of training on Force account to the workers in an organization affect achievement of Value for Money training is one

of the key elements as agreed by all respondents that without training the achievement of value of money in an organization will be widely affected. Also The analysis in table 4 analyzes the findings of lack of skilled Labor in Force Account affect achievement of Value for Money an average of 4.20 show that Lack of skilled Labor in Force Account affect achievement of Value for Money. Furthermore findings of personnel competencies in Force Account affect achievement of Value for Money show that an average of 4.23 agree on the fact that personnel competencies in Force Account affect achievement of Value for Money.

This implies that personnel experience, Lack of Training, lack of skilled Labor and Personnel competencies affects the achievement of value for money under Force Account project. This finding agrees with Shengeza (2018) who says that in order to ensure efficient use of force account the procuring entity should have qualified personnel to carry out and supervise the required works.

Inferential Statistics

Effect of Capabilities of personnel in achieving value for money

Regression model was used to assess influence and relationship between personnel capabilities and achievement of value for money

Table 5: Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.860 ^a	.740	.732	.40036

Results from Table 5 show that R-square is 0.740; if we multiply this by 100% we get almost 74%. So 74 % of variations in the dependent variable are explained by independent variables. This means that for Personnel competencies, Lack of skills, Personnel experience, Lack of training 74 % influence variations in value for money (variations can be achieving or non-achieving).

Table 6: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.970	4	14.743	91.975	.000 ^b
	Residual	20.677	129	.160		
	Total	79.647	133			

a. Dependent Variable: Value for money

b. Predictors: (Constant), Personnel competencies, Lack of skills, Personnel experience, Lack of training

ANOVA results in Table 6 shows to what extent the obtained sig value is statistically difference from zero. That is to say if sig value is within researcher predetermined significant value of 0.05, then the model has capability of predicting. Results show that sig value is 0.000, (F= 91.975) which is within 0.05 so regression model has predictive capability. Since the model is significant then independent variables as together were also significant on prediction

Table 7: Regression Coefficients for personnel capability

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig
	B	Std. Error	Beta		
(Constant)	.443	.166		2.660	.009
Personnel competencies	.024	.069	.021	348	.728

Lack of skills	.178	.082	.155	2.188	.030
Personnel experience	.449	.109	.467	4.125	.000
Lack of training	.468	.103	.485	4.561	.000

The findings show that lack of skills, lack of training and personal experience were statistically significant (very important) with sig values 0.030, 0.000 and 0.000 respectively at $p = < 0.05$. Only personnel competency variable was not statistically significant since the obtained sig-value of 0.728 was above 0.05.

From the table 7. The combination of term, lack of skills, training and personnel experience show that personnel capability has effect in achievement of value for money under force account method however the results shows only personnel competency has no effect in achievement of Value for Money. This Findings indicated that personnel capability has effect in achievement of Value for money in construction of buildings under force account projects. These findings were in agreement with what (URT 2013) requires in construction of buildings by force account which states that the use of force account or direct labor may be justified if the procuring entity uses its own personnel or hired labor and equipment and those personnel are adequate and qualified to carry out and supervise the required works.

Summary of findings

On this specific objective, the study findings revealed that a personal capability has an effect in achieving value for money under Force Account Projects. Majority of the respondents support the general finding. The study used four indicators which were: Personnel competencies, lack of skills, personnel experience and lack of training to determine the relationship between personal capabilities in achieving value for money. Based on regression coefficients at alpha level (5%) 0.05, lack of skills, personnel experience and lack of training were statistically significant in achievement of volume for money with sig values .030, .000, .000 respectively. Personnel competencies was not statistically significant in achieving value for money with sig value .728.

Conclusion

The study concluded that the personnel capability affects achievement of Value for Money. Most of the implementers have no experience in Force account project more over Implementers have no any training about force account while this method is new to most of the workers furthermore, Many Local Government Authorities have no skilled Personnel to undertake force Account project.

Recommendation

This study recommends that in order to achieve Value for Money under Force Account project the Local Government must employ personnel with experience in construction project also have to provide training to the Force Account implementers such as available professionals in Procurement Management Unit Staffs and works departments to get trained regularly in order bust their knowledge toward effective force account implementation, more over must make sure have enough skilled labor for project implementation. It also recommended for management to employ and allocate procurement professionals and engineers to the service provision facilities such as schools and health centers whom will responsible to execute works projects under force account effectively. This could maximize their level of value for money achievement.

Area for further study

Given the fact that, this study was conducted at a single Procuring Entity and that although the level of reliability and validity of the study was very high, still the study on Value for Money in Force Account project would have been conducted using large samples. More LGA's could have been studied as the factors affecting could differ significantly from one council to the other. Hence more study could guarantee the consistency.

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The Influence of Cost Reduction Strategy on Organization Performance at Duwasa Central Zone-Dodoma

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Abstract

Cost reduction strategy is one of the crucial mechanisms in which both public and private organization strive to install performance, now this study is going to assess the effect of cost reduction strategy on organizational performance at DUWASA, Case study design was used in this study with sample size of 75 respondents, the sample comprised with people dealing with procurement and other services at DUWASA who were interviewed so as to obtain in-depth information. The study findings revealed that, strategic procurement practices help organization to reduce all cost associated in acquiring goods work or services in the organization minimization additionally waste elimination, resource allocation and cost minimization has a positive significance influence to organization performance. The researcher recommends that the Government should put more emphasize on application of strategic procurement In conclusion Dodoma should therefore emphasize the implementation of cost reduction strategies in public procurement while working on improving its weak areas specifically by looking on the key factors for quality of requirement such as quality and other deliverable terms and condition that will affect the performance. Then it is advised that organization should identify the weak points specifically market capability analysis as part of procurement management to assess the ability of the market to meet its required goods and services in the right quantities and quality in the right timings. Also DUWASA should work in hand with government to enact policies that put more emphasis on the application of the strategic procurement practices on the public sectors and fasten them accordingly as this directly affects their procurement performance.

Key word; Cost reduction Strategy, organization performance, procurement

Introduction

Cost reduction provides a basis for more dividends to the shareholders, more bonus to the staff and more retention of profit for expansion of the business which will create more employment and overall industrial profit for performance generalization; Strategic management is the bases for the solution, Strategic management is generally Setting a direction for the organization and its staff as well as assisting an organization's in thinking about and planning for the organization's future existence that rely on cost reduction for competitive advantage. (Ansoff *et al.*, 2018). It comprises turning an organization's objectives, goals, and mission into quantifiable tasks that can be utilized to create budgets and oversee the procurement function. (Doran, 1981 & Kocabasoglu, 2002).

Identifying significant business spends categories and approaches to increase value through procurement procedures are both mechanism through which cost reduction lying on. This can be done through choosing and negotiating with suppliers, as well as choosing and analyzing vendors based on the company's procurement needs and present spending. (Azambuja *et al.*, 2014).

Development and management of major suppliers, internal operation of the procurement function and coordination of purchasing with other activities within the company, and efforts to meet or exceed customer expectations are the three basic dimensions from which strategic procurement can be tackled. It is regarded as one of the most important organizational functions with the potential to reduce costs, increase operational effectiveness, increase access to reliable suppliers, increase product or service quality, and share best practices, among other benefits. (Magnus, 2006).

In Africa, since almost every public organization needs to buy competitively work, consultancy, non-consultancy and goods or services for its operation, cost reduction remain the main criteria in evaluating supplier performance, supply chain management has drawn more attention than ever before because of the enormous potential for improvement in establishing cost reduction strategy (Christopher, 2011). a competitive advantage and lowering costs while improving the performance of products and services, (Swinder & Seshadri, 2001). Cost reduction is strategic procurement practices are vital activities not only to the public sector, but also to all sectors of

economy. This is due to the fact that the size of procurement expenditures has a significant impact on the economy and must be carefully handled.

Since strategic procurement plays vital role on the organization performance for the organization to attain its intended objectives, there should a strategic alignment between organization objectives and organization procurement planning and operations. Therefore, this study intends to assess the effect of strategic procurement on the organization performance at DUWASA Central Zone-Dodoma hence every organization's procurement department is progressively becoming one of its most vital and important departments, with the potential to favorably impact operational success and ensure reliable service delivery and competitiveness. (Masiko, 2013).

The existing practice of floating tenders numerous times a year causes long waiting periods and stock-outs and makes it challenging for manufacturers and suppliers to prepare and meet the needs of the government. (Changalima *et al.*, 2020). To date, in most developing nations, the employment of strategic contracting procedures by governments in the public procurement of development projects has received little attention. (Mahuwi & Panga, 2020).

There are number of studies have done in the area of implication of strategic procurement strategies on cost reduction. For instance, Masiko (2013) reported that despite of the unacceptable variation the study concluded that the existing procurement practices improve the institution performance. Koobair *et al.* (2017) showed that the manufacturing department, supporting departments, and suppliers understood supply risks, relationship management with suppliers and customers, the significance of process efficiency, and costs. Also, Josephat (2019) reported that public organizations have not focused on practicing strategic.

Purchasing professionals must recognize that these tools represent a means for the function to achieve its objectives; they are not a replacement for well-developed and implemented strategies. The study conducted in order to address the issues affects strategic procurement in the performance of many institutions in Tanzania. Therefore, the purpose of this research study is to assess the effect of cost reduction Strategic Procurement Practices on Organizational Performance in DUWASA Central Zone-Dodoma.

Theoretical literature review

Definition of key terms

Procurement.

Procurement has been defined as the act of buying, renting, purchasing, leasing or else acquiring goods, works and/or services by a procuring entity (PE) and it comprises all functions that relate to the obtaining of goods, works and/or services (Grandia, 2015). Moon (2013) the full action or process of acquiring or getting troops, materials, services, or property from outside a military service using methods permitted in relevant directives is referred to as procurement. More specifically, procurement in this context refers to the acquisition of goods, properties, or services at the operational level.

Strategic Procurement

The process of achieving alignment and consistency of action that generates long-term goals and an overall strategy or course of action through which the procurement department accomplishes its job is known as strategic procurement. It comprises turning an organization's objectives, goals, and mission into quantifiable tasks that can be utilized to create budgets and oversee the procurement function. (Nyabuto, 2016).

Organization Performance

Actual output of a company measured against its intended output; a company's operating performance can be used to gauge its financial performance. Utilizing operational performance indicators would make it more effective to assess business performance. Operational performance more closely reflects the effectiveness and efficiency of the business operations (Ya'kob and Jusoh, 2016). The supply chain's specific competencies, such as cost, dependability, quality, and flexibility, are reflected in the operational performance. (Slack, Chamber, and Johnston, 2010), in addition to the length of time it takes for a product to reach the market (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2016).

Principal-Agent Theory

The economists Jensen and Meckling created the principal-Agent theory, an agency model that describes the current interaction between principals and agents within the organization, in 1976. Problems that develop in the agency connection between two parties—principals like stakeholders and principals' agents like company executives—are addressed by the principal-agent theory.(Gailmard, 2012).

The core principals of agency theory are that there could be goal conflicts between agents and principles, that everyone acts in their own self-interest, that there is frequently information asymmetry between agents and principles, that agents are more risk-averse than principles, and that efficiency is the key metric of effectiveness. The agents in this study are employees (executives) in various strategic procurement-related departments, including accounting, procurement, internal audit, law and finance, trade and industry. The government and the community (stakeholders), for which the agents are accountable or acting on their behalf, are also the study's principals. The theory explains how the agent's activities influence the principal and other stakeholders, such as when the agent makes decisions that are not optimal in terms of how financial and non-financial resources are used.

Empirical Review

Rany *et al*, (2018) the present work examined the empirical relationship between cost reduction strategic purchasing and organization performance in East Java of Indonesia. The result reveals that negotiation strategy and buyer-supplier relationship mediate the effect of strategic purchasing on organization performance. Strategic purchasing also influences organization performance directly. Further, Negotiation strategy and buyer-supplier relationship influence organization performance and negotiation strategy have a more significant impact on organization performance than has the buyer-supplier relationship.

Nyabuto (2016) In his research study that aim to assess “The influence of cost reduction strategy on strategic procurement performance of public enterprise in Kenya held in Power company LTD with sample of 55 out of the total population of 110 employees Purposive sampling was

used to pick the primary sample. Moreover, Study findings indicated that strategic procurement has a positive impact on the performance of public enterprises; such as reduced costs, improvements in quality of goods and services in the organization. Challenges of implementing strategic procurement in public enterprises include changes in technology, employees' lack of requisite skills to undertake strategic procurement, lack of management commitment to strategic plans and weak governing policies and regulations. Lack of cooperation and teamwork during implementation and corruption are also major impediments.

Salema (2015) his study aims at analyzing the impact of buyer supplier integration on the logistic performance in hospital sector in Tanzania, with the aid of objective of examining the association between buying firms across function integration, buyer supplier integration and logistics performance in buyer supplier relationships, the unit of analysis is purchasing relationship between public health facilities and focal supplier acting as public agent of the national Medical store department. Empirical analysis based on data reported by 166 purchasing managers and demonstrate that strong buyer supplier integration improve performance significantly, the findings recommend that extensive cross functional integration in the buying the buying firm provides an administrative infrastructure that enhance the effectively of extensive supplier buyer integration.

Research Methodology

Study was conducted in Dodoma City at DUWASA. The major reason for the selection of this study area is due to the presence of initiation of new development projects in Dodoma city as the government is constructing the city to be a well and designed capital city and DUWASA as one of the government Institutions which supply water within the capital city. Therefore, strategically, DUWASA is a government institution with a lot of procurement practices which need to assess in terms of performance. the targeted population in this study was 92 staffs in DUWASA Central Zone-Dodoma. Such staffs are in different departments which are PMU, user departments and finance and administration department.

The study adopted quantitative research approach to analyze the effect of strategic procurement on organization performance at DUWASA central zone. This approach was used because it was realistic in terms of nature of respondents, nature of the study, time and cost factors in which

other methods would go beyond the target of the researcher, respondents and the institution understudy. A cross section research design was adopted in this study. The design was suitable for this study because it allows researcher to collect information related to effect of Strategic Procurement practices on organization performance in a single point of time. This design allowed the researcher contrast many different variables at the same time. Also, the design was very faster and cost effective and thus helped a researcher to complete with guided time and cost.

This research study adopted survey method as well as semi structured questionnaire in collecting data. Formal lists of closed-ended questionnaires were prepared. Respondents were asked questions concerning the study with much consideration on the research title. This method used closed ended questionnaires as a tool to collect some quantitative data from employees in the study area. Additionally Statistical Package for Social Sciences (SPSS) (version 20) was used to examine quantitative data using means, t-tests, and percentages; where by both inferential and descriptive statistics were adopted. The multiple regression models were used to perform the influence of time saving strategy, the influence of cost reduction strategy and the influence quality improvement strategy on organization performance at DUWASA Central Zone-Dodoma. The following regression equation was used to deliver the influence of time saving strategy, cost reduction strategy and quality improvement strategy towards organization performance;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

Y = Organization performance

β_0 = Constant coefficient

X_1 = Time saving strategy

X_2 = Cost reduction sourcing

X_3 = Quality improvement strategy

ϵ = Error estimate

Finding And Discussion

Table 2: Test for Multicollinearity Statistics of Cost Reduction Strategy

Model	Tolerance	VIF
Efficiency	.389	2.572
Waste	.769	1.300
Allocation	.406	2.461
Cost	.740	1.352

In this objective, the association between the independent and dependent variables was verified using multiple regression analysis. Before proceeding with the actual analysis, multi-co linearity tests were carried out. Multi-co linearity refers to the linear relation among two or more variables (response and predictors) of the study. It is a data problem that may cause serious difficulty with the reliability of the estimates of the model parameters (Allin, 2010). A high multi-co linearity problem was performed, and the results are shown in Table 2, which includes the values of the inflation factor (VIF) and tolerance. When the tolerance value is less than 0.10 and the VIF is greater than 10, the problem of multi-co linearity emerges. If the tolerance value is less than 0.1 and the VIF is larger than 10, the independent variable should be eliminated from the analysis due to multi-co linearity (Garson, 2012). Below Table 2 indicate the situation of multi-co linearity, in which it has revealed that all variables are below 10 of VIF, which shows no problem of multi co linearity

The Influence of Cost Reduction Strategy on Organization Performance

Table 1: The influence of cost reduction strategy on organization performance

Model	B	Std. Error	Beta	t	Sig.
(Constant)	.027	.415		.066	.948
Efficiency	.754	.096	.779	7.821	.000
Waste elimination	.097	.071	.096	1.356	.179
Resource allocation	-.009	.070	-.012	-.125	.901
Cost minimization	.148	.085	.125	1.736	.087

Efficiency

The study's findings, which are shown in Table 1, showed, efficiency of cost reduction strategy is positively significantly related to organization performance at $p= 0.000$. Also, the findings indicate that at every 1 unit increase in efficiency of cost reduction strategy, organization performance will increase by 75.4%. This implied that strategic procurement practices help organization to reduce all cost associated in acquiring goods work or services in the organization. This agrees with Magnus (2006), who argues that strategic procurement is one among the critical functions of an organization with potential to save cost improve operational efficiency access to trusted supplies and improve in quality of services.

Waste elimination

The study's findings, which are shown in Table 1, showed, waste elimination of cost reduction strategy is positively but not significantly related to organization performance at $p= 0.179$. Also, the findings indicate that at every 1 unit increase in waste elimination of cost reduction strategy, organization performance increases by 9.7%. This finding implies that, cost reduction strategy

did not remove any procurement action which doesn't add any value towards procurement performance of the organization. This result concurs to those of Christopher and Gattorna (2005) who discovered that cost savings in the procurement sector enable the company to pursue price competition tactics in downstream markets, maintain growth, and compete effectively. Therefore, there are various procurement actions like rules, regulations, administration and management which are not effectively followed at DUWASA central zone in order to increase organization performance.

Resource allocation

The study's findings, which are shown in Table 1, showed, resource allocation of cost reduction strategy is positively but not significantly related to organization performance at $p= 0.901$. Also, the findings indicate that at every 1 unit increase in resource allocation of cost reduction strategy, organization performance decreases by 0.9%. These findings imply that, there is no effective resources allocation at DUWASA central zone resulted from cost reduction strategy. These findings concur with those of Danis & Kilonzo (2014) who revealed that, though resource allocation affects procurement performance, resources allocated to public financial sector were not enough. Therefore, there is poor cost reduction strategy at DUWASA central zone which means there is poor allocation of public resources like finance, human and physical.

Cost minimization

The study's findings, which are shown in Table 1, showed that, cost minimization as one of the cost reduction strategy is positively but not significantly related to organization performance at $p= 0.087$. Also, the findings indicate that at every 1 unit increase in cost minimization of cost reduction strategy, organization performance will increase by 14.8%. These findings imply that, the application of cost reduction strategy is not highly applicable well in order to increase organization performance. This result concurs to those of Christopher and Gattorna (2005) who discovered that cost savings in the procurement sector enable the company to pursue price competition tactics in downstream markets, maintain growth, and compete effectively. Therefore, the DUWASA central zone undergoes cost reduction strategy but the organization has

experienced with cost maximization. This might be due to poor personnel, corruption and lack of capabilities of public servants

Conclusion And Recommendation

Conclusion

Dodoma should therefore emphasize the implementation of cost reduction strategies in public procurement while working on improving its weak areas specifically by looking on the key factors for quality of requirement such as quality and other deliverable terms and condition that will affect the performance. It can therefore be concluded that, DUWASA Central Zone-Dodoma have a lot to benefit by practicing cost reduction strategic procurement.

Recommendations

Although strategic procurement practices may not be the only influencing factor to procurement performance, it is imperative that DUWASA Central Zone-Dodoma review their existing procurement systems in order to identify the weak points specifically market capability analysis as part of procurement management to assess the ability of the market to meet its required goods and services in the right quantities and quality in the right timings. Also, DUWASA should work in hand with government to enact policies that put more emphasis on the application of the strategic procurement practices on the public sectors and fasten them accordingly as this directly affects their procurement performance.

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Influence of ICT Infrastructure in Implementation of E-Tendering in Tanzanian Local Government Authorities: A Case of Dodoma City Council

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Abstract

The aim of this study was to assess the influence of ICT infrastructure in the implementation of e-tendering. The study used cross section research design. The sample size for this study was 85 respondents they were selected using simple randomly sampling while key informants were selected using purposively sampling technique. Data were collected using questionnaire and interview guide and analyzed using descriptive statistic method and multiple linear regression analysis. The findings revealed that, ICT infrastructure had statistical significance and positive influence in implementation of e-tendering. The study concludes that, ICT infrastructure are important factor that influence implementation of e- tendering in Tanzania. Therefore, the study recommends that Local Government Authorities under Dodoma City Council to improve ICT infrastructure in terms of budget allocation for ICT infrastructure, reliable internet supply and adequate software and hardware, provide enough funds for equipment, repair and maintenance and staff training and hire highly qualified IT staff and provide them with proper training in order to update their knowledge and skills.

Key words: Implementation, E-tendering, Local government, Tanzania, Dodoma City

Introduction

Electronic Tendering is where the procurement process is conducted online. Under Regulation 22 of the Public Contracts Regulations 2015, it is a legal requirement for public bodies to

use electronic means of communication and information exchange in regulated procurement procedures in Tanzania. As a component that is contained in electronic Procurement, E- tendering is done with a software application that includes features for Supplier Management and complex Auction that supports electronically process of tendering, e-auctioning, vendor or supplier management, catalogue management and contract management (Baily, 2008). It involves the online preparations of Tender where organizations can be connected directly to Suppliers for the purpose of buying product and services at the lowest cost possible (Peter, 2012).

Over past years, procurement systems through automated technology have become as the tool that integrated management of the procurement practice for both the personal and community sectors (Lysons and Farrington, 2016). Many governments in the world aspire to comprehend the use of electronic procurement as a competitive weapon in providing the best and qualified services to their citizens. Public agencies worldwide have prioritized E-tendering as a strategic agenda and have implemented or implementing the same to benefit from the system (Vaidya et al., 2016). Tanzania government through the Ministry of Finance and planning introduces the procurement regulatory authorities such as Public Procurement Regulatory Authority (PPRA) and Public Procurement Appealing Authority (PPAA) etc. so as to regulate whole procurement process in Tanzania through the creation of strategic policies together with adoptions of electronic procurement in procuring entities.

The Tanzania e-Government Strategy, 2012-2017 declares that Tanzania is operating in a traditional manner. This as a result, makes it hard for the country to realize the benefits that come with E-tendering and e-Government at large. Tanzania is one of many developing countries where multiple e-government initiatives are being introduced to support poverty reduction and sustain good governance, demonstrated by recent technology adoptions and government strategy documents. Such initiatives are driven by the promise of efficiency and transparency in governance to leapfrog the slow process of development (Grönlund, 2015), and are exemplified by Tanzania's ICT policy, dating back to 2003, where "e-government was introduced as a major driving force to "enhance sustainable socio-economic development and accelerated poverty reduction both nationally and globally" (The United Republic of Tanzania, 2003).

E-tendering is the process of buying and selling supplies and services over the internet (Joep, 2010). It differs from e-commerce in that it makes use of a supplier's closed system typically available only to registered users. When implemented properly, E-tendering opens the lines of communication between a company or organization and a supplier by creating a direct link and facilitating interactions such as bids, purchase orders and emails (Joep, 2010). Government agencies were among the first organizations to implement e-procurement, which offers a quick ramp-up, along with benefits such as spend savings, a one-stop, seamless system, and transparency in the purchasing of goods and services.

E-tendering makes every detail of government purchasing, contracts and vendor relationships available to the public, such as: Current and past procurements and contracts, as well as possible future procurements, Detailed information on rules, processes, and standards driving each procurement, Bidding opportunities and statewide contracts, Information on vendor names, items procured, prices paid and the purchasing agency, Metrics and sorting such as purchases by an agency, top 20 vendors and top 20 commodities purchased.

Although the government has instigated some reforms (e.g. TANePS) to execute E-tendering in its public procurement system so as to make it further efficiency, effectiveness, economy as well as transparency including procurement policy of 2012. Also, the government has been influencing the use of ICT in the procurement functions by installation of Network facilities, by buying up-to-date computers, fiber cables and training its manpower on the adaption E-procurement. One of the functions of E- tendering is to facilitate the complete tendering process from the advertising of the requirement through to the placing of the contract. This includes the exchange of all relevant documents in electronic format (Gao, 2017).

Nowadays, Municipals in Tanzania usually have to handle multiple procurement needs by applying different kinds of information systems developed by various suppliers. Such process will become inevitably as it required by the law of the country that all the procurement process especially tendering has to be undertaken through the use of electronic system available such as TANePS for example. Therefore, the researcher's concern to the influence of ICT infrastructure on the implementation of e-tendering in local government authorities in Dodoma City council.

Statement of the Problem

Electronic tendering system replaced the manual paper-based tender processes with electronically facilitated processes based on best tendering practices to save time and money. Under this system buyer are able to manage the tenders coming in, with all tenders stored in one place (Kabendela, 2019). E-Tendering System offers an opportunity for automating most of the tendering process: from preparing the tender specification; advertising; tender aggregation; to the evaluation and placing of the contract (Kibacho, 2018).

Regardless of the efforts made by Tanzania government such as establishing Procurement laws and regulations and establishing the electronic procurement systems (TANePS), implementing E-Tendering in procurement has experienced some challenges including poor E-Tendering infrastructure, employee competence, lack of skilled manpower, inadequate funds for capital investment, unstable power supply, security of data transaction, insufficient policies and inadequate awareness among procurement stakeholders as well as technological indifferences (Rusohoka, 2020). However, it has been argued that most procuring entities (PEs) in Tanzania, especially local government authorities such as municipals, have not fully implemented and used e- Tendering (Sungau, 2019).

It has been found that only 12% of Municipal Councils in Tanzania have completed and actively implemented e-tendering in Tanzania (CAG Reports, 2018/2019). On the other hand, more than 26% of municipals still practice manual tendering in Tanzania, apart from the Law's requirement and introduction of the e-tendering system (TANePS).

However, number of the studies has been conducted regarding e- procurement by describing factors affecting the Implementation of e- procurement (Kweka & Maagi, 2021; Abdul & Lyimo, 2019). However, there are few studies in Tanzania that have addressed the factors affecting Implementation of e-tendering in Tanzanian Local Government Authorities. Therefore; this study addressed the knowledge gap by assessing the influence of ICT infrastructure on the implementation of e-tendering in local government authorities in Dodoma City council.

Relevant Studies

Oslomo bekov *et al.* (2012) conducted a study on the effects of ecommerce and ICT on procurement related activities in England a case of mobile phone industry. The study had three objectives which were to find the policies, models and strategies on electronic commerce of procurement activities and the challenges encountered. Firms that do long-term planning and consider purchasing to be strategic are also likely to build long-term cooperative relationships with their key supplier's electronic commerce (e-commerce) tools provide the opportunity to enhance two elements of procurement process: communication and transaction aspects (Surveys have confirmed that e-commerce tools and IT solutions have an influence on procurement-related processes. Companies have reported: cost reduction, reduction in purchasing cycle time or order time as well as reduction in number of suppliers, increase in the number of products supplied by main suppliers, inventory savings, and reduction of purchasing prices.

Croom and Johnston (2013) who made analysis of an increase in internal customer service levels, achieved as a result of cost reduction, process compliance and customer satisfaction in American industries. He revealed that some companies have created very close links with their suppliers, closer than just long-term cooperation. Companies have taken an interest in improving their suppliers' performance by exchanging staff, providing the necessary training, tools, technologies and performance evaluation. The key roles in business relations provide two-way communication, cross-functional teams and larger purchasing power.

Piason (2019) conducted research on the risk of using E-tendering in organisation in Tanzania. The study revealed that while most companies have accepted the risks involved in adoption of E-tendering others have moved forward and have identified additional risks associated with e-procurement. Regarding internal risks companies identify the need to provide proper training at all levels for better understanding and collaboration across the organization. Investigation of the in Tanzania E-tendering provider enlightens the lack of managerial commitment constraining the Implementation of e-tendering. Hence, a need to change the overall behavior and management is acknowledged.

The research recognized external risks associates with e-tendering, which mainly constitutes-customers and suppliers. There are risks of dealing with new customers with no previous records,

lack of integration between the system used by the suppliers and the companies and connectivity. Implementation of E-tendering is slow and results are delayed mostly due to lack of technological standards regarding the implementation strategy, it was felt that company changes their strategic approach to suit their needs. The paper concludes that the three different approaches identified by theory are not necessarily different as one could start with an approach and change it on a later stage to convene its current requirements.

Methods

Research Design

A case study design was employed in this study so as to provide concrete and realistic statistical data from the field concern, the study used a case research study design where by the Dodoma city council stood to be a representative of Local government authorities in Tanzania. The researcher has opted to use case study because case studies were able to provide the data, which is very detailed on a specific topic.

Population of the study

The target population of this study included 108 employees of the Dodoma City specifically; the employees were from PMU, ICT, Administration and Human resources department (Dodoma City, 2021)

Sampling procedure

The study used both purposive and stratified sampling techniques. Purposive sampling was used to obtain six Key informants, these Key informants includes Head of Department and unit since they have no equal chance to be selected.

The sample of 85 respondents was obtained using stratified sampling technique in which respondents were grouped in different strata. The stratification was based on professionalism for all departments and units involved Electronic Tendering process. To get sample size in each department, the study applied proportional sample as shown in Table 1.

Table 55: Sample size Distribution

S/	Department/Unit	Population	Sample size
1	Procurement management Unit	9	7
2	Finance department	14	11
3	The internal audit department	15	12
4	Service delivery department	15	12
5	Contractors/ suppliers	49	39
6	Policy Planning Department	3	2
7	Legal Department	3	2
	Total Sample Size	108	85

Source; Field Data, 2022

Sample size

The sample size of this study was 85 respondents which were essentially drawn from the entire population of 108 respondents. The sample size was small but adequate number so as it presented the whole of the population. The sample size was determined by the Taro Yamane (1967) formula below so as have a level of significance. The sample size in this study was determined by the formula shown below:

$$n = \frac{N}{1 + N(e)^2}$$

Where; n= Sample size

N= Number of members

e= Level of precision

e=5% since the level of confidence is 95%

Therefore, sample size calculated as follows;

$$n = 108 / 1 + 108(0.05)^2 = 85$$

Therefore, the sample size is 85.

Data Analysis Technique

Quantitative data were analyzed using descriptive statistics where frequencies, percentages, mean score and standard deviation was employed while inferential statistics particularly Linear Regression Analysis was used to determine significant factors affecting e-tendering Implementation. The Regression equation model is presented as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + \epsilon_i \dots \dots \dots (i)$$

Where:

Y = Number of tenders executed online

β_0 = Constant term

β_1 = Parameter to estimated

$X_1 \dots \dots \dots X_n$ = Determinants or Independent Variables

X_1 = Budget allocation for ICT infrastructure

X_2 = Reliable internet supply

X_3 = Adequate software and hardware

ϵ_i = Distributed error term

Results and Discussion

Descriptive Results

To examine ICT infrastructure and implementation of e-tendering, level of the respondent's agreement was ranked in a 5-point Likert scale of 5 = strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = strongly disagree. The findings are as presented in Table 4 using mean score and standard deviation.

Table 2: Descriptive results of ICT infrastructure and Implementation of e-tendering (n=85)

Statements	Mean	SD
The city council provide enough budget for ICT infrastructure	2.388	1.196
The city council has reliable internet supply that facilitate the e-tendering task	4.188	1.017
The city council has adequate software and hardware for e-tendering Implementation	1.405	1.452

Source: Field Data, 2022

Findings in Table 2 revealed that, respondents disagreed with statement that the city council provide enough budget for ICT infrastructure (Mean score= 2.388). This implies that, city council of Dodoma did not provide sufficient budget for ICT infrastructure to support the implementation of e-tendering. During interview session with first respondent, the responded added that:

“...The budgetary allocation affects the e-tendering implementation in two ways. First, the budgetary allocation affects the organization's ability to invest in e-tendering technology. Second, the budgetary allocation affects the organization's ability to allocate resources to training and support for e-tendering implementation...”

The results imply that limited budget to buy material required for e-tendering implementation affects the implementation of e-tendering. Sanewu (2016) revealed that inadequate allocation of budget is the main challenge in the implementation of E-tendering system.

Moreover, respondents agreed with statement that the city council has reliable internet supply that facilitate the e-tendering task (Mean score= 4.188). This implies that, the Dodoma city council has reliable internet supply to facilitate e-tendering implementation.

During interview session with second respondent, the respondent added that:

“...The reliable internet supply in implementation e-tendering is important since it can help to improve the communication between the suppliers and the buyers. It can also help to improve the efficiency of the procurement process...”

Furthermore, respondents disagreed with the statement that, the city council has adequate software and hardware for e-tendering implementation (Mean score= 1.405). This implies that, the Dodoma City Council has no adequate software and hardware to implement e-tendering.

During interview session with third respondent add that:

“...Adequate software and hardware are important in e-tendering implementation. Without the proper tools in place, businesses may find it difficult to manage and track their procurement processes electronically. Additionally, without adequate hardware, procurement process of goods may experience downtime when attempting to conduct e-tendering transactions...”

The findings imply that lack of ICT facilities which supports e-tendering system may affect the implementation of e-tendering. This is supported by a study done by Kamel (2014) who found that limited software application hinders the implementation of e-tendering. Kamel also admitted in his findings that it is difficult to get the various e-tendering hardware and software suppliers and consultants from outside to solve software issues

Inferential Statistics Results

Multiple linear regressions were conducted to determine ICT infrastructure attributes that influence implementation of e-tendering. The findings were summarized in Table 3.

Table 3: Regression results on influence of ICT infrastructure attributes in implementation of e-tendering

Variables	Standardized Coefficients		t-Value	Sig.
	β	Std. Error		
(Constant)	0.800	0.283	1.874	0.000
Budget allocation for ICT infrastructure	0.426	0.063	6.106	0.201
Reliable internet supply	0.241	0.076	3.020	0.014
Adequate software and hardware	0.480	0.107	4.336	0.410
Dependent Variable: Number of tenders executed online				
$R^2 = 68\%$, $F = 84.1$				

Sources: Field data, (2022)

The results of model summary indicated that the R^2 was 0.68; meaning that 68% of the total variance in the dependent variable is explained by the ICT infrastructure attributes (budget allocation for ICT infrastructure, reliable internet supply, adequate software and hardware). Thus, higher value of R^2 indicates that the model was fit in explaining the ICT infrastructure attributes that influence implementation of e-tendering.

Based on the result in Table 3 the attributes of ICT infrastructure had positive coefficient implying that a unit change of ICT infrastructure budget will improve e-tendering by 42.6 percent. With regard to the attribute of internet supply, results indicate that the beta coefficient is 0.241 meaning that a unit change of internet supply will improve e-tendering by 24.1% also this attribute has a p-value of 0.014 ($p < 0.05$). This implies that there is a significant relationship between reliable internet supply and effective implementation of e-tendering. These results were also supported by the study done by Mangitung and Novitasari (2015) found that, there is a strong relationship between reliable internet supply and effective implementation of e-tendering. This is because e-tendering requires a high level of internet connectivity in order to work properly. If there is a disruption in the internet supply, then e-tendering will not be as effective. This is because it will be difficult for bidders to submit bids and for buyers to access the information, they need to make a decision.

The attribute of software and hardware had a coefficient of 0.480 meaning that a unit change in software and hardware will cause improvement in e-tendering by 48 percent. These findings imply that any unit improvement of e-procurement software and hardware parts will lead to increased implementation of e-tendering in Local government authorities. This was also supported by the study done by Ashaari *et al.*, (2018). Found that, reliable computer hardware is essential for e-tendering. if the devices are not reliable, they may not be able to process the bidding or contract submissions correctly. This can lead to incorrect bids being submitted and delays in the overall process. In addition, if the hardware is not reliable, it may result in lost data or corrupted files. This can cause a major setback for the organization and compromise the integrity of the e-tendering process.

Conclusions, Recommendation and the Area for Further Research

Conclusion

The study found that, ICT infrastructure had statistically significant and positive affecting implementation of e-tendering in terms of reliable internet supply. Therefore, the study concludes that, reliable internet supply was important factor in ICT infrastructure in implementation of e-tendering in Local Government Public Entities.

Recommendation

The study found that budget allocation for ICT infrastructure and adequate software and hardware were not adequate in Dodoma city council. Therefore, the study recommends that, Local Government Public Entities should improve ICT infrastructure in terms of budget allocation for ICT infrastructure and adequate software and hardware.

Area for Further Research

Another similar study should be undertaken to examine the influence of ICT infrastructure in implementation of e-tendering in other Tanzanian Local Government Authorities these factors should include budget allocation for ICT infrastructure and adequate software and hardware Since the study found were insignificant factors in Dodoma city.

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The Influence of Rural Electrification on Household Income Generation in Chamwino District, Tanzania

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Abstract

This study specifically addressed the influence of rural electrification on household income generation in Chamwino District, Tanzania. This study specifically addressed the aspect rural electrification facilitate household income generation in Chamwino District. This study employed cross sectional design to collect information at once from different respondents. The sample size was 95 respondents, in which questionnaire administered to the household and interview was held to the key informants. The findings showed that rural electrification promoted cheap energy accessibility for business activities, cost reduction in accessing energy, facilitate service provision, income generating activities access reliable source of electricity, income generating activities managed to expand as a result of rural electrification and promote cost effective service. This study recommends that Ministry of Energy in Tanzania, have to improve rural electrification at affordable cost for the purpose of improving household income generation. TANESCO at Chamwino district has to improve rural electrification for increased accessibility of electricity.

Keywords: Rural electrification, Household income, income generation activity, Chamwino, District.

Introduction

Modern energy accessibility is highly considered a source for poverty reduction towards improvement of economic condition (International Electricity Agency [IEA], 2011). Electrification is crucial factor for human life which is used to promote water, agricultural productivity, health care, education, employment and conserve the environment (World Resource Institute [WRI], 2018). The rural electrification programme is extensively promote accessibility of reliable and improved electricity supply for domestic, industrial and commercial purposes (Groth, 2019).

In Tanzania, the Government recognizes the fundamental role of energy in the national economy towards industrialization and achieving Tanzania Development Vision 2025, East African vision 2020 and Sustainable Development Goals (SDGS) 2030 (NBS, 2020).

Tanzania Electricity Supply Company Limited (TANESCO) is under state ownership and control with full responsibility to supply electricity in both Tanzania main land and Zanzibar (EWURA, 2018). Through addressing these challenges Government of Tanzania (GOT) expects to generate 10,000 MW by 2025, to widen electricity production (EWURA Report 2018).

According to NBS and REA Baseline Survey Report (2020), about 78.4 percent of all residents in the Tanzania Mainland access electricity while in 2016/17 were 67.5 percent accessed electricity. There is equivalent increase of 11 percent from 2016/17 to 2019/20.

Looking rural-urban differentials, the 2019/20 findings indicate that, 99.6 percent of urban population have access to electricity compared to 97.3 percent observed in 2016/17. Adding to that the rural population electricity accessibility in 2019/2020 was 69.8 percent which is higher than in 2016/17 which was 49.3 percent with an increase of 21 percent (NBS & REA Baseline Survey, 2020). This increase of rural electricity connection services has it profound impact in the household income generation. Rural electrification in the income generating activities expected to be 100 percent as a result of new electricity connection, yet micro-enterprises and other economic activities are struggling with electrification in terms of absence, uncertainty connection and low accessibility in the micro enterprise context (Bishogeet *al.*, 2018).

Several efforts are initiated in Tanzania to improve rural electrification, for example improvement of Rural Energy Agency for the purpose of insuring modern energy accessibility in rural areas while maintaining efficient and capacity building of the rural residents (Power Africa Off-Grid Project Report, 2019).

Dodoma region REA programme aimed at increasing accessibility of electricity to wide range of residents in rural areas like Chamwino District which are at accounted for 54.4 percent to increase up to 100 percent (NBS and REA Baseline Survey Report, 2020).

However, previous studies reveal that lack of electricity hinder the household income generation especially that are connected to electricity use (NBS & REA Baseline Report, 2020; Bishoge et al., 2018). The delay of income generation activities in most instances contributed to delay of rural electrification in Chamwino District (URT, 2019; EWURA, 2018). The effect of rural electrification in household income generation needs to be searched effectively. For such a reason, this study explored the effects of rural electricity. Therefore, this study was explored the influence of rural electrification on household income generation in Chamwino District. Tanzania, keeping in mind that the Chamwino is among of the Districts in Tanzania that benefit from rural electrification projects which are carried out across the country.

Problem Statement

Rural electrification in the income generating activities expected to be 100 percent as a result of new electricity connection, yet micro-enterprises and other economic activities are struggling with electrification in terms of absence, uncertainty connection and low accessibility in the micro enterprise context (Bishoge *et al.* 2018).

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Theoretical literature review

Diffusion of Innovation (DOI) theory

Diffusion of Innovation (DOI) theory is one of the oldest social science theories that was developed by Rogers in 1962. This theory explains the idea or product diffusion in the spread in the specific society or system. The diffusion theory consider people as element in the social system, are important aspect in the adoption of such new idea, behavior or product (Idris, 2020). The adoption means that people do or apply something new that previously apply. The important aspect that facilitates adoption based on the perceived idea of innovation. The innovation process is relied on the information gathering and uncertainty. The social system is the source of information flow in which adopters live (Zhai, Ding, & Wang, 2018). Learning about innovation is the responsibility of potential adopters to avoid the real consequences in the applicability of innovation. The information assessments rely on the belief of innovation and ability to adopt. The theory contains innovation in the social system through diffusion process that follow the S shaped curve. This theory relates the time of adoption of innovation. This is organized in the innovation domain based on the socio-economic status of adopters, personality and communications.

Electrification is the innovation process and related to the characteristics of adopters, electricity is based on the characteristics of users either in the rural areas or urban areas. To this end, electrification in the rural areas towards the existing household income generating activity must address the characteristic and personality of users.

Empirical Literature Review

Riva et al. (2018) conducted research on power access and rural development. The study based on the existing linkage between electrification and development. In most instances developing the poor people and rural communities are very complex. The findings showed that electricity use is recognized in different dimension of socio-economic growth of income generating activities. The economic generating activities need to be marketed to increase its accessibility for the wide range, the electricity need to support health, education and social activities. The conceptualization of electricity model emphasizes the supply and accessibility of electricity power for income generating activities. The ability to design stage and system as described in the comprehension need to be well articulated in the use of electricity.

Gebrehiwot et al. (2019) focused on optimization and cost-benefit assessment electricity power system in rural electrification in Ethiopia. Solar system electrification has become more common in Ethiopia which has challenge on the electricity power system. Electricity supply integrates and optimizes electricity generation to lower power production unit costs.

The findings show that rural people access electricity system through solar energy, wind, battery and generator, these systems are mostly selected in rural areas. The electricity generation in the basis of village demand of 19.6 kW with the cost of 0.207 dollars per kilowatt hour. The respective net current cost of 82,734 dollars.

Zalengera et al. (2020) did on decentralization in electricity energy accessibility. In developing country's ability to delivery affordable and reliable electricity power is quite challenging in rural areas. The underserved people are on the system of high expensive grid supply of electricity. The grid electricity supply in most instances focused on the electricity supply. The sustainability of the project is aligned on the service provided, the users tend to affect the system once failed to pay service timely. The electricity users expected to be improved in terms of economic through electricity supply. The design of solar energy in Kenya. The electricity is needed for the income

generation activities. The electricity in Kenya is based on the model of electricity. The supply is mostly extended in the income generating activities, the ability to generate income at low cost for the community. The supply of electricity expected to improve the economic activities of the off grid community in long term.

Rache and Blanchard (2018) studied in Kenya on the solar energy for income generating activities for the rural communities. The ability for the developing world to supply affordable and reliable electricity for rural community. The supply of affordable electricity services is the key aspects for improving economics of the users. The findings revealed that electricity supply has contributed in the improvement of income generating activities in rural areas. For example mobile phone charges. Energy centre model is one of the income generating activities source. The community in rural area depend on the power supply for economic and development in particular.

Ngowi et al. (2019) specifically addressed the benefits and challenges of minigrid in the Southern highlands in Tanzania. The specific attempt relied on the use of electricity for production purpose. It applied the application of mixed methods of qualitative and quantitative, with the use of stakeholders and interviews to address the water flow and power for the rural area consumption. The entrepreneurs' activity took place as a result of electricity supply through the minigrid. Activities which are conducted in rural areas are barber shops, welding machines, mobile phone charging, saloon and photocopy. The challenges of electricity supply tend to affect the socio-economic activities, in most instances contributed to lack of adequate technical resources, lack of spare parts. To this end minigrid has profoundly contributed to development of the socio-economic activities that rural people demand. Therefore, the need to improve the system is much profound in the market price of electricity to affect the harm of the income generating activities that depend on the electricity.

Conceptual Framework

The conceptual framework draws the relationship between independent and dependent variables as used in this study. The presentation considered most significant relationship of both independent and dependent variables.

The relationship in this study presented the influence of rural electricity services on household income generation on the independent variables such as the usage of rural electricity in HIG barber shops/saloon, welding machines and mobile phone charging. The resulting effect is household income generation which is measured to increase or decrease as a result of electrification

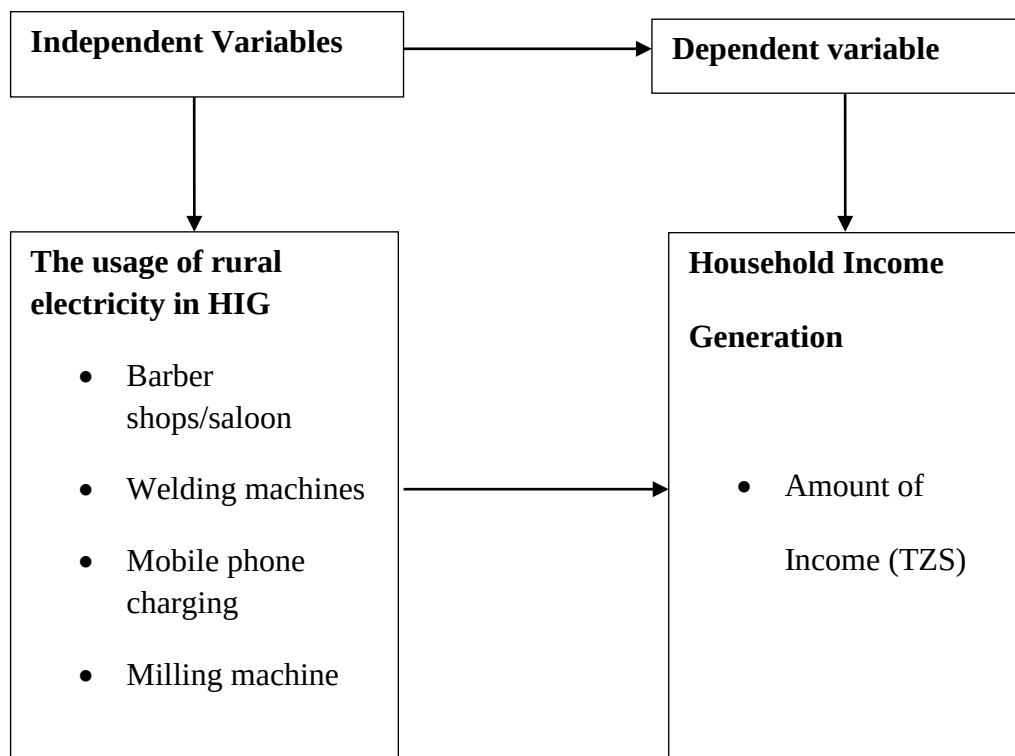


Figure 10: Conceptual Framework

Source: Research Findings, 2022

Research Methodology

This study was used a cross sectional design that focus on the collection of information on a single point in time. This was based on the collection of information based on the appropriate methods. It allowed reaching respondents from different villages and wards in Chamwino district. Hence more information collected on the influence of rural electricity on household income generation in Chamwino District, Tanzania.

Population and Sampling

This study was conducted in Chamwino District in Dodoma region to cover the influence of rural electricity services on household income generation. This study area is selected due to the following reasons; existence of electrification programs and income generation activities opportunities, the programs covered the electricity supply from the national grid and existence of new connection demand, Diversity of population characteristics such as 7% is 60 years old, whereas 49 percent is under 15 years old. The remaining 44 percent is ranged between 15 and 59 years old. These population in different age group reflect the potential customers of income generation activities that exist in Chamwino District.

The Yamane (1967) formula was applied in the calculation of sample size. The target population is 1,770 households head in Chamwino District.

$$n = \frac{N}{1 + N(e^2)}$$

n= Sample size

N = Total population

1 = Constant

e2 = estimated standard error equal to 5% to 95% confidence level.

$$n = \frac{N}{1 + N(e^2)} = \frac{1770}{1 + 1770 (0.1)^2} = 94.6 \text{ approximated as } 95.$$

This study was used both probability and none probability in the selection of study area and respondents. The purposive sampling was used in selecting the study area (Chamwino District) and key informants. The simple sampling method was employed in selecting the respondent in the study area. Stratified sampling was applied in in this study to obtain sample. After division of household in Chamwino district into strata, the sample was selected randomly those who use electricity as an income generating activity. The respondents were selected randomly villages connected to electricity in Chamwino district. The respondents were having equal chance of being selected constitute a sample.

Method of Data and Analysis

Primary data were collected by the use of questionnaire in terms of open and closed ended questions. A pre-test of the structured questionnaire to household who used electricity for income generation. Interview was used to collect data from the key informants in Chamwino district, such as Tanesco managers in the new connection, ward executive officer, village executive officer.

Primary data were collected based on the study research questions. The Statistical Package for Social Scientists (SPSS 21 version was used to generate data analysis, it was analysed by the use of descriptive analysis method. This is because it aim to present the aspects rural electricity facilitate household income generation.

The household income generation before and after rural electrification in Chamwino district was analysed by the use of paired sample t test. The paired sample t test was used to compare the means of two samples when each observation in one sample can be paired with an observation in the other sample. This is because it aimed to present the effect of rural electrification in household income generation.

Paired Samples t-test: Formula

A paired samples t-test always uses the following null hypothesis:-

$H_0: \mu_1 = \mu_2$ (the two population means are equal)

The alternative hypothesis can be either two-tailed, left-tailed, or right-tailed:

H_1 (two-tailed): $\mu_1 \neq \mu_2$ (the two population means are not equal)

H_1 (left-tailed): $\mu_1 < \mu_2$ (population 1 mean is less than population 2 mean)

H_1 (right-tailed): $\mu_1 > \mu_2$ (population 1 mean is greater than population 2 mean)

Findings and discussion

This chapter presents and discuss the findings of the study. The first section presents profile of respondents. The second section indicate the aspects rural electricity facilitate household income generation in Chamwino District. The Third section compare household income generation

before and after rural electrification in Chamwino district. The last section present the relationship between rural electrification and household income generation in Chamwino District.

Profile of Respondents

This section presents socio-economic characteristics of respondents. It includes gender, age, education level, marital status and occupation so as to understand the influence of rural electrification in household income generation. The information was used to facilitate the rural electrification in household income generation in Chamwino District, Tanzania.

Gender of respondents

The study presented the gender of respondents as indicated in Table 1.

Table 56: Gender of respondents

Category	Frequency	Percent
Male	53	55.8
Female	42	44.2
Total	95	100.0

Source: Research Findings, 2022

Findings in Table 2 showed that, a large proportion 55.8% of respondents are male, while female accounted for 44.2% respectively.

These findings showed that both genders appeared in this study. In Tanzanian culture male are dominant in any household decision and matters concerning development. Thus, household decision is dominant with male compared to female counterparty in rural electrification.

Age of the respondents

The study sought to indicate age of respondents as presented in Table 2.

Table 57: Age of the respondents

Category	Frequency	Percent
21-30 years	32	33.7
31-40 years	46	48.4
41-50 years	9	9.5
Above 50 years	8	8.4
Total	95	100.0

Source: Research Findings, 2022

Findings presented in Table 2 revealed that, 48.4% of the respondents fall under the age group of 31-40 years, compared to a small proportional 8.4% fall above 50 years, while others 33.7% fall under 21-30 years and 9.5% fall under 41-50 years. These findings showed that majority of respondents are between the ages of 31 and 40 years. These findings imply that active age group are important on the influence of rural electricity services on household income generation in Chamwino District, Tanzania.

Education level of respondents

The study sought to establish the education level of respondents as indicated in Table 3.

Table 58: Education level of respondents

Category	Frequency	Percent
Primary education	50	52.6
Secondary education	28	29.5
Certificate	11	11.6
Diploma	4	4.2
University	2	2.1
Total	95	100.0

Source: Research Findings, 2022

Findings in Table 3, revealed that a large proportion 52.6% of the respondents had attained primary education. While a small proportion 2.1% had university education. Others 29.5% had secondary education, 11.6% certificate and 4.2% had diploma respectively. This implied that primary education in Tanzania is compulsory and basic thus at least every one required to attain. The researcher on the other side contacted literacy respondents hence easily understood the questionnaires.

Marital status of respondents

The study sought to establish the marital status of respondents as shown in Table 4.

Table 59: Marital status of respondents

Category	Frequency	Percent
Single	12	12.6
Married	65	68.4
Divorced/separated	12	12.6
Widow	6	6.3
Total	95	100.0

Source: Research Findings, 2022

Findings in Table 4, indicated more than half 68.4% of respondents are married, compared to 6.3% who are widows, while about 12.6% are single and 12.6% are divorced. This implied that married respondents are well committed in income generating activities as a result of rural electrification hence fulfil family responsibilities.

Occupation level of respondents

The study presents the occupational level of respondents as follows in Table 5.

Compare household income generation before and after rural electrification in Chamwino district

The second specific objective that sought to compare household income generation before and after rural electrification. The comparison of contribution as a result of rural electrification presented by the use of paired sample t test.

Household income generation before and after rural electrification had a mean score of .46316 and standard deviation 1.16519 the significance level of .000 ($p = .000$), which is below 0.05, indicate the statistically significance. Level of income annually had a mean score -.25263 and standard deviation of .92217, the significance level of ($p = .009$), it is less than 0.05, means that the comparison is also statistically significance. These findings imply that rural electrification contributed to increase of household income generation. This is because rural people engaged in income generation activities hence generate more income.

Table 60: Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower Upper			
Pair 1	Household income generation before and after rural electrification	.46316	1.16519	.11955	.22580 .70052	3.874	94	.000
Pair 2	Level of income Annually	- .25263	.92217	.09461	-.44049 6.4776E-2	- 2.670	94	.009

Source: Research Findings, 2022

These findings imply that change of rural electrification tend to transform labour force that are used in agriculture to the income generating activities. Similarly, Ngowi et al. (2019) argued that rural electricity is directed in the productive use of goods or services. Business activities that shift the economic from agriculture basis dependent to the more business nature for example barber shops, welding machines, mobile phone charging, and saloon and photo copy. These findings imply that change resulted from rural electrification are major source of rural economy transformation. Similarly, Bos, et al. (2018) noted the rural economy transformation through rapid connection of electricity for example improvement of people lives, with increase electricity system and coverage to the people living in rural areas.

Conclusion and Recommendation

Conclusion

Therefore, it has been noted that rural electrification provided accessibility of cheap energy for business activities, reduced the cost of accessing energy, facilitate service provision, income generating activities access reliable source of electricity, income generating activities managed to expand as a result of rural electrification and promote cost effective service.

The comparison of household income generation before and after rural electrification, showed that after rural electrification lead to increased household income generating activities, increases hours for household income generating activities, new and more efficient business, increases employment opportunities, increases business opportunities and facilitate rural economy transformation.

It has been noted that rural electrification for example provision of cheap energy, reliable source of energy for income generation, doing of agriculture work at night and time for household working at night have a positive relationship with household income generation in Chamwino District.

Recommendations

Recommendations presented to the Ministry of energy, Chamwino district TANESCO, Household at Chamwino District as follows;

Ministry of Energy in Tanzania, have to improve rural electrification to enable rural residents' electricity accessibility at affordable cost for the purpose of improving household income generation. The specific attempt has to create environment for household income generation performance.

TANESCO at Chamwino district, specifically need to improve rural electrification for increased accessibility of electricity. The major reason is to support household income generation. The rural residents need reliable electricity for the sake of economic activities improvement and continue transformation of the rural economy.

Household at Chamwino district are supposed to utilize electricity connection and opportunities in the income generation. The major reason for electricity accessibility in rural area are to support rural economy in terms of transformation towards the business nature.

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The Effect Of Risk Management On Financial Performance Of Listed Commercial Banks On Dar Es Salam Stock Exchange , Tanzania

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Abstract

This study assessed the effect of credit risk management on financial performance of listed commercial banks in Tanzania. The study adopted a cross-sectional research design. The study employed a simple random sampling strategy in selecting 98 respondents from three Commercial banks listed. Data were analyzed using both descriptive and inferential statistics. The study findings indicated that; It was established that the variation in Return On Equity can be explained by the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation, Risk Identification) by 85.5 per cent. The study also established that the variation in Return On Asset can be explained by the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation, Risk Identification) by 82.6 percent. There is strong and positive relationship among variables in the study ($R=0.872$). The study concluded that at NMB Bank Plc, CRDB Bank Plc, and Development Credit Bank Plc (DCB), Risk Management had a significant effect on financial performance. This implies that risk management strategies had great contribution on financial performance in the selected listed Commercial Bank in Tanzania. The study recommends that the listed commercial banks should continue implementing proper risk management to guide their operations. Internal controls are key to the operations of the Commercial banks. To ensure effective controls, the banks' management specifically the senior audit manager, accountants should facilitate conduction of regular checks on the ability of the strategies in place for risk management in regards to efficient risk assessment. Therefore, the commercial banks should regularly check on their operations and the policies to deal with threats to examine whether these meets all the banks' requirements to safeguard the banks from losses. Prior to approving any loan applications, banks must do a thorough analysis of the clients' credit histories and repayment capacity in order to improve financial performance and reduce the risk of non-performing loans

in the future.

Keywords: Internal controls, Financial performance, Commercial banks.

Introduction

Through their role as financial intermediaries and the financial services they offer to communities and countries, commercial banks play a significant role in economic development and promote economic progress in any nation. The finance facilities they provide and enable the investigation and growth of profitable investment avenues by both private investors and institutional ones (Pastory, & Kaaya2013; Chen, 2020).

When fulfilling the main objective of banking management of maximizing the wealth of the shareholders, banks are exposed to various types of risks that have an impact on their performance and activities. To accomplish this objective, bank managers should evaluate the cash flows and the assumed risks as a result of allocating their financial resources to various areas of utilization (Alshatti, 2015).

Credit risk is one of the most significant risk that banks face, considering that granting credit is one of the main sources of income in commercial banks (Li and Zou, 2014). Kargi (2011) also asserts that credit remains the core source of income for any bank across the globe. Sufi & Qaisar (2015) and Li and Zou (2014) further assert that Credit risk is vital and more expensive risk of a financial institutions. This risk has a significant impact compared to other risks faced by the banking sector since it is the firm's a direct solvency threat. Therefore, the management of the risk related to that credit affects the profitability of the banks.

Strong credit risk management is crucial to the development of a quality loan portfolio and to the health of commercial banks and the economy as a whole (Charles and Kenneth, 2013; Gizaw, Kebede, & Selvaraj, 2015).

Generally, the stability of the banking sector is considered as a precondition for economic stability and growth. The stability of the banking sector depends on its profitability and capital adequacy (Halling and Hayden, 2006; Tabari Naser, Ahmadi and Emami, 2013)

Globally; Credit risk accounts for more than 50% of all risks components in banks and other financial institutions (FI). Thus, managing credit risk has steadily evolved into the most important duty for the effective operation of a FI (Angelini, Di Tollo, & Roli, 2008). A significant relationship exists between credit risk management and profitability of Turkish

deposit banks from the period of 2005 to 2017 (Ekinici, & Poyraz, 2019). The credit risk management impacted on financial performance of the commercial banks of Pakistan as calculated by ROE and ROA, where the indicator of credit risk management were not performing loan and capital adequacy ratio (Iftikhar, 2016).

In Africa, amongst, mainstream commercial banks in Cameroon Isoh, & Nchang, (2020) opined that financial performance increases with the implementation of internal operational risk management strategies. In Nigeria, sound operational risk management practices impact positively on the financial performance of banks (Fadun, & Oye, 2020).

From the East African perspective; in Kenya, Wachira, (2017) noted that credit risk management has an effect on loan performance amongst commercial banks. Sungunya (2018) noted that savings and the lending rate by WEF contributed significantly towards loan performance index of Women Enterprise Fund Nakuru Town East. In Uganda, credit risk management impacts on the performance of Ugandan commercial banks (Serwadda, 2018). In Rwanda, credit risk identification, credit scoring mechanism and credit analysis and assessment are good predictors of the model consequently and those three indicators used of credit risk management have shown a positive relationship with the financial performance of commercial banks in Rwanda (Ugirase, 2013). In Southern Sudan, the banks considered risk identification as a process in credit risk management which affected performance, risk identification has insignificant effect on financial performance of banks, risk analysis and appraisal insignificantly affected financial performance of commercial banks, risk monitoring significantly affected financial performance, credit approval was a significant factor affecting financial performance of commercial banks (Mogga, Mwambia, & Kithinji, 2018).

Statement of the problem

In the Tanzania's context, the reports that increasing nonperforming loans relative to total loans reduces the profitability of a bank or financial institution and so is increasing loan loss provisions relative to nonperforming loans (Nshala, 2017).

According to 2016–2017 Annual Report of Bank of Tanzania Due to a variety of factors, including a decline in net budgetary inflows, a sluggish economy, stricter regulatory standards, such as the introduction of VAT charges for financial services, and the poor performance of the private sector, which has resulted in an increase in non-performing loans, the majority of commercial banks in Tanzania have been experiencing tight liquidity conditions in the market

since the first half of 2016/2017 (Bank of Tanzania Annual Report 2016/17).

Previously, Five banks, namely Covenant Bank For Women Limited, Efatha Bank Limited, Njombe Community Bank Limited, Meru Community Bank Limited, Kagera Farmers Corporative Bank Limited, and Efata banks, had their banking licenses withdrawn by the Bank of Tanzania in January 2018 due to undercapitalization. The growth in defaulters (non-performing loans) put these banks in a tight liquidity situation, making it difficult for them to fulfill the maturities of their clients. This was one of the main causes of these banks' undercapitalization. After Twiga Bancop Limited was placed under statutory supervision in October 2016 due to undercapitalization, TPB Bank PLC and Twiga Bancop Limited merged in May 2018 with the approval of the central bank. In order to enhance supervision and performance of both state-owned commercial banks and private banks, BOT revoked and suspended the banking licenses of a number of institutions (Lema, 2019).

It is against the above background that it can be noted that when it comes to the listed commercial banks it is evidently noted that there is very limited studies which have touched on the effects of credit risk management on financial performance. Thus prompting the exploration so as to bridge this knowledge gap in the context of Tanzania on the effects of credit risk management on financial performance of the listed commercial banks in Tanzania.

Specific objectives

- To establish the effect of Risk Analysis and evaluation on financial performance of listed commercial banks in Tanzania.
- To determine the effect of Risk control and report on financial performance of listed commercial banks in Tanzania.
- To examine the effect of Risk monitoring on financial performance of listed commercial banks in Tanzania.

Literature Review

Theoretical Literature Review on the effects of credit risk management on financial performance

Two theoretical framework have been proposed by researchers to underpin the effects of risk management on financial performance which include the Agency Theory and Modern Portfolio Theory as discussed below: -

The Agency Theory

Several theories have been used to explain the link between internal control and financial performance the agency theory is applicable to this study. The agency theory holds that a firm is made up of owners of the resource (principals) and the managements (Jensen & Meckling, 1976). The agents of the firm have more information than the principals which creates the information asymmetry which affects the ability of the firms' owners to monitor whether their interests are being protected by the agents (Jensen & Meckling, 1976). This theory is essential to the study since the internal control systems is one of the mechanisms employed to ensure that no agency problem exists within the firm by reducing agency costs that affects the overall performance of the relationship as well as the benefit of the principal. The internal control system further helps to reduce information asymmetry within the firm. Further the theory recognizes that any incomplete information about the relationship interest or work performance of the agent described could be adverse and a moral hazard.

Modern Portfolio Theory

The basic portfolio model was developed by Harry Markowitz in the 1950s and early 1960s. Markowitz is regarded as the father of Modern Portfolio theory since he invented the portfolio model that underlies Modern Portfolio Theory. The MPT theory offers a framework for specifying and measuring investment risk and developing associations between risk and expected returns. (Reilly and Brown, 2011). To-date this is considered as one of the most applied and widely tested theories as far as portfolio and risk management are concerned. The fundamental assumption of the MPT is that investors are rational indicating that they ultimately seek to maximize returns while minimizing the risk or loss; and that investors timely receive all relevant information related to their investment decision according to Mangram, (2013), Constantinides and Malliaris, (1995) and Markowitz, (1952). The credit risk that affects the Commercial Banks in Tanzania may include the risk of default, untimely repayments by clients, insufficient financial analysis knowledge by staff as well as limited knowledge on how to effectively manage and implement client repayments. Therefore, the higher this perceived risk is, the higher the likelihood of experiencing a deteriorating loan portfolio that goes on to affect the overall loan portfolio performance. It has molded how institutional portfolios are managed and induced the usage of passive venture methods. This theory was therefore deemed relevant

in assessing Credit Risk Management Practices on the Loan Portfolio Performance in Commercial Banks in Tanzania.

Empirical Literature Review the effects of risk management on financial performance

Jeanne, (2019) assessed the internal control and financial performance in public institution in Rwanda. Statistical Package for Social Sciences (SPSS) was used to analyses data. The findings discovered that there are effect of control environment on the financial performance of public institution, from regression analysis, a unit increase in control environment could result to increase in financial performance by 0.482. Risk assessment was found to have a positive significant effect on the financial performance of public institution. From regression analysis, a unit increases could result to increase in risk assessment in financial performance by 0.001. The study examined the effect of control activities on the financial performance in public institutions, from regression analysis, a unit increase in control activities could result to increase in financial performance by 0.213. The finding also found that net investment and net income was declined. From the findings showed that return on assets of RSSB was decreased over the three years. From 13.9% to 8.4% means that RSSB is not effectively managing its assets to generate greater amount of money. The study concludes that there is a significant positive relationship between internal control and financial performance; it concluded that RSSB solvency is still need improvement.

Sleimi (2020) research analysis has shown that the total risk management practices for exogenous variables have maintained supportive effects on Jordanian banks performance. It was found that Risk Monitoring relates with other practices in having a supportive impact on Jordanian banks with positive and significant impact on bank business performance ($\beta = .247$, $\rho = .000$).

Karanja, Bichanga and Kingoriah (2018) evaluated the influence of credit risk monitoring on lending performance of Commercial Banks in Nairobi County, Kenya. The results of the study revealed that the combined effect of credit risk monitoring activities influenced bank lending performance positively. The study concluded that credit risk monitoring activities significantly influenced the lending performance of Commercial Banks.

Ndalu (2018) conducted a study on the effect of credit risk management on performance of deposit taking SACCOs within Kenya, adopting a descriptive research design, it was found that credit risk monitoring had a major and significant influence on the performance of Deposit taking SACCOs within Kenya. It was further revealed that effective credit monitoring can only be achieved by ensuring the monitoring process is adequately documented and tested for reliability on an ongoing basis as well as ensuring SACCOs information system supports loan monitoring.

Mogga, Mwambia and Kithinji (2018) conducted a study to analyze the effect of credit risk management procedures adopted by Commercial Banks on their performance in South Sudan. It was established that respondents agreed that risk identification was well coordinated in their bank where all employees in the bank had been trained on risk identification, there were well defined procedures on classifications of risk, well set out procedures for appraising risk, they had also formulated appropriate risk monitoring practices, employed adequate managers to monitor the Bank's exposure to risk, the bank had also in place written guidelines on the credit approval process and persons empowered with the credit approval authority did not have customer relationship responsibility in the bank. In general, all the stated procedures positively and significantly affected the overall performance of the Commercial Banks.

Ng'etich, (2017) established the effect of internal control on the financial performance of firms listed on the Nairobi security exchange. The findings revealed that control environment, risk assessment, control activities, information and communication, monitoring, leverage, liquidity and firm size were found to be satisfactory variables in explaining performance of firms listed under Nairobi Securities Exchange. This is supported by coefficient of determination also known as the R square of 59.9%. Results showed that control environment and firm performance are positively and significantly related, risk assessment and firm performance are positively and significantly related , control activities and firm performance are positively and significantly related , information and communication , monitoring, leverage , liquidity and firm size were also positively and significantly related to firm performance. This implies that a unit increase in any of the above variable will lead to a unit increase in firm performance. The study concluded that control environment, risk assessment, control activities, information and communication, monitoring, leverage, liquidity and firm size have positive relationship with firm performance.

Conceptual Framework

According to Sitko (2013), the conceptual framework is a system of concepts, assumptions, expectations, beliefs, and theories that support and inform your research through explaining either graphically or in narrative form the key factors, concepts or variable and the presumed relationships between them. Independent variable in this study is internal controls that has several dimensions like; risk analysis and evaluation, risk control and report and risk monitoring. The dependent variables is financial performance as indicated by the indicators of Return on Asset and Return on Equity. The Figure 1 below shows the cause effect relationship between independent variables and dependent variables were upholding risk management strategies results into better financial performance.

Independent variable

Dependent variable

INTERNAL CONTROL



Figure 11: The conceptual framework of the study

Research Methodology

Research Design

The study adopted an causal cross-sectional research design that is descriptive in nature which deals with cause-effect relationship to investigate the effects of Internal Controls on the Financial Performance of the banking industry in Tanzania using the Commercial banks listed on Dar es Salaam Stock Exchange as an example. It was conducted to have a better understanding of the existing the effects of Internal Controls on the Financial Performance of banking industry in Tanzania using the Commercial banks listed on Dar es Salaam Stock Exchange did not provide conclusive results.

Area of the Study

In this study banking institutions listed on Dar es Salaam Stock Exchange were the study area. The rationale of selecting banking institutions listed on Dar es Salaam Stock Exchange that included; NMB Bank Plc (NMB), CRDB Bank Plc, and Commercial Bank Plc (DCB) lies on the fact that risk management techniques greatly influences their financial performance. This makes an ideal area to assess the effects of risk management on the financial performance of banking industry in Tanzania using the Commercial banks listed on Dar es Salaam Stock Exchange hence it was easy to access data.

Sampling procedures

The study applied both probability and non-probability sampling procedures in selecting the study sample. The study employed a stratified sample technique to select respondents from each banking institution listed. The stratification based on departmental professionals and the number of employees involved in the internal control, from each stratum the proportional random sampling was employed to select respondents. On the other hand, purposive sampling was employed to select commercial banks listed on Dar es Salaam Stock Exchange and key informants. The key informants in this study included top managers of the commercial banks listed on Dar es Salaam Stock Exchange. Purposive sampling was used because it provides an opportunity to focus on particular characteristics of the population that are of interest, which best enabled the researcher to answer their research questions. The distribution of the selected sample from each company is presented on table 1 below.

Table 61: Distribution of Sample size in the selected commercial banks listed on the Dar es Salaam Stock Exchange

Commercial banks listed on the Dar es Salaam Stock Exchange	Population	Total Sample
NMB Bank Plc (NMB)	2,000	39
CRDB Bank Plc	2,000	39
DCB Commercial Bank Plc (DCB)	1,000	20
Total	5000	98

Source: Estimations by the Researcher (2022)

Data Analysis Methods

The data collected was analysed based on the specific objective and the study design. The data analysis process included; editing, coding as well as cleaning (Nyakibari, 2020). Both descriptive and inferential statistics were computed with the aid of the Statistical Package for Social Sciences (SPSS).

Quantitative data

In order to examine the effect of Risk Management on financial performance of listed commercial banks in Tanzania. The multiple regression model was used to examine the effect of Risk Management on financial performance of listed commercial banks in Tanzania.

$$(Y) = \beta_0 + \beta_1 \text{RiAnEv} + \beta_2 \text{RiCoRe} + \beta_3 \text{RiMo} + \epsilon$$

Where by:

Y= Financial performance

RiAnEv=Risk Analysis and evaluation

RiCoRe=Risk control and report

RiMo=Risk monitoring

Findings And Discussion

The effect of Risk Management on financial performance.

Effect of Risk Management on ROE.

Table 2:Model Summary

					Change Statistics				
Mod	R	Adjusted	Std. Error	R Square	F				Sig. F
el	R	Square	R Square	Estimate	Change	e	df1	df2	Change
1	.864 ^a	.855	.151	11.47916	.855	2.964	4	40	.031

a. Predictors: (Constant), Risk monitoring, Risk control and report, Risk Analysis and evaluation,

Results from the Table 2 above indicate that the R- square was estimated at 85.5% indicating that the model was fit in explaining the variables. It has also established that the variation in Return On Equity can be explained by the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation, Risk Identification) by 85.5 per cent. This indicates that there were other variables that were not put into consideration that accounted for 14.5% of return on equity. The study findings concur with Ndalu (2018) that noted that credit risk monitoring had a major and significant influence on the performance of Deposit taking SACCOs within Kenya. It was further revealed that effective credit monitoring can only be achieved by ensuring the monitoring process is adequately documented and tested for reliability on an ongoing basis as well as ensuring SACCOs information system supports loan monitoring.

Table 62: Multiple Regression Analysis results on effect of risk management on ROE.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.356	7.254		.187	.0356
	Risk Analysis and evaluation	14.340	10.479	.547	1.368	.008
	Risk control and report	11.568	8.402	.514	1.225	.040
	Risk monitoring	15.362	11.990	.722	.531	.000

a. Dependent Variable: Return On Equity

The findings indicate that risk analysis and evaluation had a positive statistically significantly related with ROE at the p-value less than 5% ($p < 0.008$) with the coefficient at .547. This implies that the unit change in risk analysis and evaluation on average increased the ROE by 54.7%. Risk control and report had a positive statistically significantly related with a financial performance (ROE) at the p-value is less than 5% ($p < 0.040$) with the coefficient at .514. This

implies that the unit change in risk control and report on average increased the ROE by 51.4%. Finally, Risk monitoring had a positive statistically significantly related with ROE at the p-value less than 5% ($p < 0.000$) with the coefficient at .722. Therefore, a more risk management led to better ROE.

Generally, the study findings show that risk management has a significant effect on return on equity of selected listed commercial banks in Tanzania. This concurs with Ng'etich, (2017) who looked at the effect of internal control on the financial performance of firms listed on the Nairobi security exchange and revealed that control environment, risk assessment, control activities, information and communication, monitoring, leverage, liquidity and firm size were found to be satisfactory variables in explaining performance of firms listed under Nairobi Securities Exchange. The study concluded that control environment, risk assessment, control activities, information and communication, monitoring, leverage, liquidity and firm size have positive relationship with firm performance. The study findings concur with Sleimi (2020) who noted that the total risk management practices for exogenous variables have maintained supportive effects on Jordanian banks performance. It was found that Risk Monitoring relates with other practices in having a supportive impact on Jordanian banks with positive and significant impact on bank business performance ($\beta = .247$, $\rho = .000$).

Effect of Risk Management on ROA.

Results from the Table 4 indicate that the R- square was estimated at 82.6% indicating that the model was fit in explaining the variables. It has also established that the variation in Return On Asset can be explained by the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation) by 82.6 percent. This indicates that there were other variables that were not put into consideration that accounted for 17.4% of return on asset.

Table 63: Model Summary

Mod el		R	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Chang e	df1	df2	Sig. F Change
1		.629 ^a	.826	1.86988	.826	6.552	4	40	.000

a. Predictors: (Constant), Risk monitoring, Risk control and report, Risk Analysis and evaluation

ANOVA was applied to predict the significance of the regression model so as to predict a continuous dependent variable of Return On Asset from a number of independent variables that include; Risk monitoring, Risk control and report, Risk Analysis and evaluation, Risk Identification. From the table below, it was found that the model was significant in linking ROA with the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation) since the P-Value 0.000 was less than 0.05. the study findings concur with Karanja, Bichanga and Kingoriah (2018) who evaluated the influence of credit risk monitoring on lending performance of Commercial Banks in Nairobi County, Kenya and noted that the combined effect of credit risk monitoring activities influenced bank lending performance positively. The study concluded that credit risk monitoring activities significantly influenced the lending performance of Commercial Banks.

Table 5: Multiple Regression Analysis results on effect of risk management on ROA.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.750	1.182		1.481	.0146
	Risk Analysis and evaluation	3.217	1.707	.761	1.299	.037
	Risk control and report	3.064	1.669	.614	1.046	.043
	Risk monitoring	4.568	1.953	.866	2.339	.024

a. Dependent Variable: Return On Asset

The coefficient of risk identification was positively (0.942) associated with Return on asset which was significant with a p-value of less than 5% ($p < 0.031$). This implies that the unit increase in the level of Risk Identification will lead to a 94.2% increase in the overall return on asset.

The findings also showed that risk analysis and evaluation has a positive and significant relationship with return on asset with a coefficient of 0.761 and p-value of 0.037, an implication that on average a unit increase in risk analysis and evaluation results in a 76.1% increase in return on asset within the selected listed commercial banks in Tanzania.

The study findings show that the coefficient of Risk control and report was positively (0.614) associated with return on asset which was significant with a p-value of less than 5% ($p < 0.043$). This implies that the unit change in Risk control and report on average increased ROA by 61.4%.

The study findings show that the coefficient of Risk monitoring was positively (0.866) associated with ROA which was significant with a p-value of less than 5% ($p < 0.024$). This implies that the unit change in risk monitoring will on average increase ROA by 86.6%.

Generally the study findings show that risk management had a positive significant effect on return on asset of listed commercial banks in Tanzania. The findings concur with Jeanne, (2019) who assessed the internal control and financial performance in public institution in Rwanda and noted that risk assessment was found to have a positive significant effect on the financial performance of public institution. From regression analysis, a unit increases could result to increase in risk assessment in financial performance by 0.001. The study findings concur with Sleimi (2020) who noted that the total risk management practices for exogenous variables have maintained supportive effects on Jordanian banks performance. It was found that Risk Monitoring relates with other practices in having a supportive impact on Jordanian banks with positive and significant impact on bank business performance ($\beta = .247$, $p = .000$).

Conclusions And Recommendations

Conclusion

Basing on the study findings; It was established that the variation in Return On Equity can be explained by the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation) by 85.5 per cent. This indicates that there were other variables that were not put into consideration that accounted for 14.5% of return on equity. The study also established that the variation in Return On Asset can be explained by the independent variables (Risk monitoring, Risk control and report, Risk Analysis and evaluation, Risk Identification) by 82.6 percent. This indicates that there were other variables that were not put into consideration that

accounted for 17.4% of return on asset. Generally, at NMB Bank Plc (NMB), CRDB Bank Plc, and Commercial Bank Plc (DCB), Risk Management have a significant effect on financial performance. This implies that risk management strategies have great contribution on financial performance in the selected listed Commercial Bank in Tanzania.

Recommendations

Given the conclusions and observations reported herein, the following recommendations are presented below: Risk management has a positive significant relationship with financial performance. It is therefore important for commercial banks to implement proper risk management to guide their operations. Internal controls are key to the operations of the Commercial banks. To ensure effective controls, the banks' management specifically the senior audit manager should facilitate conduction of regular checks on the ability of the strategies in place for internal controls in regards to efficient risk assessment. Therefore, the commercial banks should regularly check on their operations and the policies to deal with threats to examine whether these meets all the banks' requirements to safeguard the banks from losses. Prior to approving any loan applications, banks must do a thorough analysis of the clients' credit histories and repayment capacity in order to improve financial performance and reduce the risk of non-performing loans in the future.

Implications of the findings

Different aspects of risk management (risk identification, risk analysis and evaluation, risk control and report and finally risk monitoring) have a significant effect on financial performance of commercial banks. Therefore different stakeholders that include; the management, staff, government agencies should ensure that commercial banks and other financial institutions do uphold risk management strategies. This will be key in ensuring that the risk management practices lead to good and sound financial performance.

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Determinants of International Market Access Among Cashew Nuts Small Holder Farmers in Bagamoyo District in Coastal Region, Tanzania.

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Abstract

Small-scale farmers significantly aid in boosting the economy, creating jobs, and ensuring food security. However, research done in Tanzania found that exports of cashew nuts are not as high as they are in other nations. The main objective of this study is to investigate the factors affecting international market access among the Tanzanian cashew nuts small holder farmers. The study's specific objectives included evaluating the government's role in exporting cashew nuts to foreign markets, the difficulties indigenous small-holder farmers face in exporting cashew nut products to foreign markets, and the establishment of a connection between indigenous small-holder farmers and cooperative unions in those markets. A Sample size of 135 of small-scale farmers who are members of agricultural cooperatives and were randomly chosen from cooperative societies that deals with cashew nuts. Cross-sectional design was employed to farmers and executives of selected cooperatives operating in the Bagamoyo district. Descriptive statistical methods were applied. The results show that 29.6% of respondents believe that the government plays a facilitation role in the exportation of cashew nuts to Bagamoyo's global markets. The study also showed that a lack of business knowledge of global markets is a problem for indigenous small-holder farmers trying to sell cashew nut products to foreign markets. In addition, the survey found that only 65.1% of indigenous smallholder farmers and cooperative unions in international marketplaces are connected. Cashew nut marketing, however, was usually regarded as being inefficient and underdeveloped. Initiatives for cashew growth should therefore concentrate on both production technology gaps and marketing problems. The study makes recommendations for the cashew nut business that include establishing a dedicated buying post system, employing warehouse receipts, and improving research and extension services.

Key words:

Indigenous, small holder farmers, exporting cashew nut & foreign markets

Introduction

In the majority of third world nations, agriculture is the foundation of the economy. Through exports, agriculture contributes to the economy's revenue, employment, and foreign exchange needs. Maintaining livestock and cultivating crops like cashew nuts are both aspects of agriculture. One of the most important cash crops in Tanzania that generates income for farmers is cashew nuts. Small-scale farming accounts for over 98% of the production, which is done to supply both the domestic market and the export market. Tanzania contributed an average of 4% of the nation's overall foreign exchange profits between the early 1960s and the early 1970s since it lacked any domestic processing companies (Kerlin & Pollak, 2018).

According to various production reports from African nations, processors also require a significant policy environment to operate in marketplaces that are both competitive and revolutionary (Webber & Labaste, 2009). Some of the surveys did, however, highlight the needs of farmers who need to have access to high-quality seedlings, technological know-how, and market data.

Since the 1970s, over 30% of the world's cashew nuts have been produced in Tanzania, one of the nations that deals with the production of cashew nuts (Tola & Mazengia, 2019). There are seven areas in Tanzania that are involved in the production of cashew nuts: Lindi (18%) farms, Mtwara in the country's south (70% farms), Dodoma smaller estates and farms, Iringa smaller estates and farms, Pwani (8%) farms, Ruvuma (4%) smaller estates and farms, and Tanga (1% farms). Although cashew nut output in Tanzania is expanding, it is not performing very well, thus the government decided to create the Cashew nut crop board to address the issue (Nyirenda, 2021).

However, in Tanzania, cashew nuts are now one of the main agricultural export products, and in 2000, they generated the most foreign exchange (BoT, 2020). The crop is farmed over more than 33 districts in mainland Tanzania, with the majority of the production occurring in the Mtwara, Lindi, Ruvuma, and Coast Regions.

Despite efforts by the Tanzanian government and other development partners to find foreign markets for the sale of cashew nut crops, farmers and other business people continue to confront difficulties in exporting cashew nut crops. Additionally, farmers are sending out positive price signals and other production-related signals that are driving up cashew nut production. Due to

seasonality and fluctuating prices on the international market, Tanzania's cashew nut production is subject to significant fluctuations (Agyemang et al., 2020). As a result, the purpose of this study is to identify the variables influencing small-scale cashew nut growers in the Bagamoyo district's access to foreign markets.

Statement of the research problem

In Tanzania, cashew nuts are now one of the main agricultural export products, and in 2000, they generated the most foreign exchange (BoT, 2020). The crop is farmed over more than 33 districts in mainland Tanzania, with the majority of the production occurring in the Mtwara, Lindi, Ruvuma, and Coast Regions. Farmers from a number of other regions in mainland Tanzania as well as Pemba have expressed interest in the crop due to its significant economic potential. Despite Tanzania's low cashew nut production relative to other nations, Tanzanian cashew nut farmers still require access to foreign markets because the domestic market only absorbs roughly 10% of all cashew nut production in Tanzania (Mouzam, 2020). Furthermore, only 10% of farmers of cashew nuts currently sell their products abroad (Williams et al., 2015). That means that there is 80% shortage of cashew nuts selling markets which possibly could be solved by expanding exportation to global markets.

Specific Objectives of Study

- i. To assess role of government in exporting cashew nuts in the foreign markets from small holders' farmers in Bagamoyo.
- ii. To examine the challenges faced by the small holder farmers in exporting cashew nuts in foreign markets in Bagamoyo.
- iii. To establish the linkage between indigenous small holders' farmers and cashew nuts cooperative unions from Bagamoyo in exporting cashew nuts in foreign markets.

Literature Review

Theoretical and Empirical Review

The Comparative Advantage theory, developed by Ricardo in, served as the foundation for this investigation (1978). This traditional view stresses the significance of international trade, including the export and import of goods, because nations differ in their endowments, making exchange necessary. According to this argument, a country cannot rely on its own resources to survive, hence it must permit the importation and exportation of goods because there is a comparative advantage. For example, Tanzania may import cashew otherproducts such as India

and also in import the scarce goods such as Motor Vehicles from India. However, Ricardo warns that the relativity in comparative advantage should be taken carefully otherwise it may bring economic crisis and economy downturn in the original country that possesses wealth due to un-proportional exchange. This theory links with this study because it looks at the exportation of cashewnuts because the domestic market is not enough to consume all cashewnut all produced in Tanzania. However, due to the nature of the study, the theory is not expected to provide variables leading this study rather they were obtained from debate going on from empirical literature review.

The theory's strength is that it provides a succinct overview of both older and newer hypotheses. It also offers commentary on actual studies conducted to support these views. focuses on the minute scale, second. It discusses the relationships between and more recent theoretical advancements, as well as the micro aspects that affect exporting. A forecast of likely study directions for theory development comes up at number three. It deals, on the one hand, with the psychological and other factors that affect any firm's ability to export. On the other hand, a notion for categorizing products into particular sub-categories is put out, which is claimed to be beneficial for the creation of a successful export strategy for both other exporting enterprises.

Weakness of the theory: Recently, attention to the factors that determine how effective an export is has shifted to the importance of top management attitudes regarding exports and international markets. All studies concur that the domestically focused manager has a considerably more negative perception of overseas clients and intermediaries, export profitability, and export finance and paperwork than an exporter does (Broucker et al., 2017; Gilchrist, 2017; Nchimbi & Korojelo, 2021; Sarkadi, 2020). The outlook for the future includes directions for research that are based on looking at data that has been broken down by industry and firm. Research by product category has also proven to be fruitful, with the category being determined by the location of manufacturing, the length of the product life cycle, and the degree of the technology gap. Other categories are created as a result of the unique requirements of MNCs and LDCs. It is intended that the new research would produce recommendations for global marketing tactics. Additionally, it will contribute to the development of ideas that could be useful in the creation of comprehensive long-term plans for governments and businesses.

It is highly improbable that an increase in global export demand can be met without an increase in producer prices, at least in the short term (Mbelwa et al., 2019; Nufus et al., 2020; Zhang et

al., 2019). In his study, Zhang et al. noted that foreign income and relative prices have significant effects on the performance of Tea exports, suggesting that Tea export growth could be stunted. This suggests that the performance of cashew exports was significantly influenced by foreign changes, suggesting that causes outside the power of local policymakers might be responsible for the surge in tea exports. This suggests that the performance of cashew exports was significantly influenced by foreign changes.

Kalai & Zghidi (2019) conducted the research on the factors limiting contribution of cashew nuts on small scale holders in southern part of Tanzania. The study conducted using questionnaire's, interviews and field study methods that used to identify that shortage and poor capital available for modern agro-mechanization reduces cashew nuts production. However, prices fluctuations for the cashew nuts causes failure of farmers to finance pesticide and fertilizers. There poor managements and paying cash costs to the labour that required to produce new and quality cashews (Albuquerque Mendes et al., 2019). Exchange rate, pricing, and amount produced are the factors in this study that are the independent variables that are supposed to explain the dependent variables that are expected to explain the dependent variable, according to the conceptual framework. Volumes of cashew nut exports. The study's conceptual framework is depicted in figure 1 below.

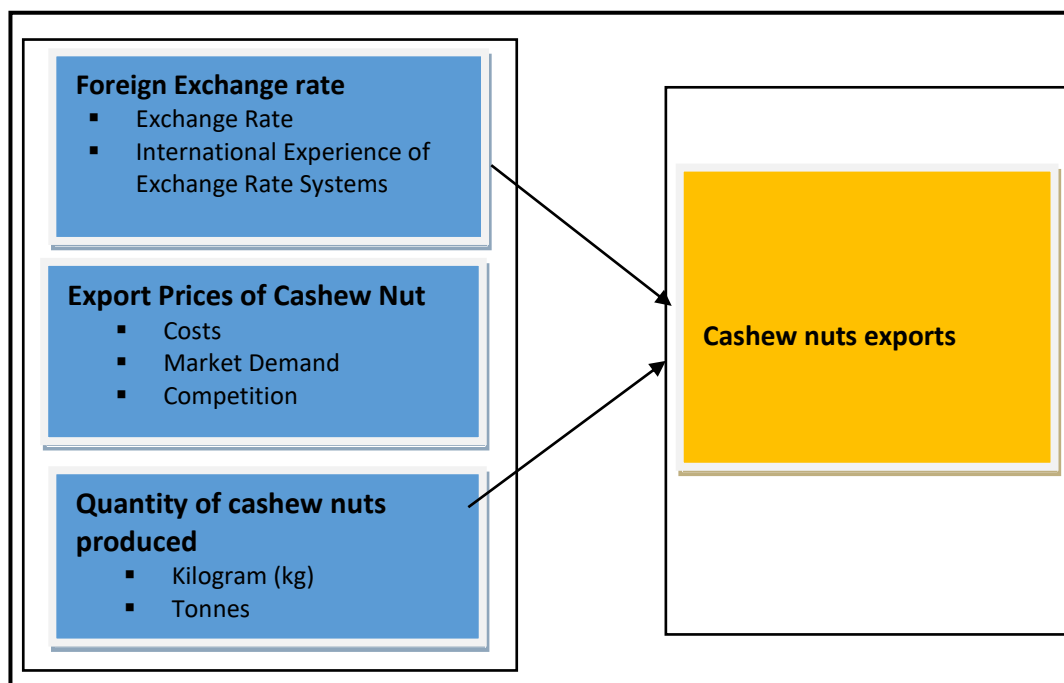


Figure 1: Conceptual framework

Research and Methodology

Research design, this study employed cross-sectional research design, where data were meticulously gathered at one particular period. Determining the short-term and even long-term correlations between the variables under research was made easier by the design (Gliner et al., 2016). This approach also involves data collecting at a single moment in time where multiple features are taken into account simultaneously. A qualitative technique was used in the surveying of small customers (small enterprises), agricultural extensions, and small-scale holders regarding the selling and production of cashew nuts. When improving an evaluation, both qualitative and quantitative methods are used to make sure that the weaknesses of one piece of data are counterbalanced by its advantages (Mertens, 2018). This study used a mixed-methods strategy that combined quantitative and qualitative research. Target Population, a representative unit from the target population is necessary for this study because the researcher is unable to deal with the entire population (Kothari & Garg, 2014). The intended audience includes members of Agricultural Cooperative Societies (AMCOS) who are small-scale producers, purchasers (small enterprises), agricultural extension agents, and cashew nut board executives in the Bagamoyo district who have first-hand knowledge of cashew nut marketing and production. Overview of the 240 individuals sampled from this population.

Table 64: Target Population

Unity Category (AMCOS)	Small Scale Farmers (Members of AMCOS)		Total
	Male	Female	
Fukayosi AMCOS	65	16	81
Taratibu AMCOS	89	31	120
Umoja niNguvu AMCOS	24	15	39
Total	178	62	240

Source: Tanzania Cooperative Development Commission (TCDC) 2022

Sample Size

According to Kothari and Garg (2014), in order to establish an accurate generalization, researchers must collect data from a smaller set of participants who closely match the larger population or subgroup. The sample size is a tiny section of the population that is chosen for study. 150 respondents made up the study's sample size. The time and budgetary restrictions on finishing the study were taken into consideration when the researcher decided on the sample size.

The sample was computed using the formula provided below.

The Slovin Formula;

$$\text{Sample size (n)} = \frac{N}{(1 + N(e)^2)} \dots \dots \dots (1)$$

Where by

n =Number of samples

N = Number of total respondent (in group) or Total population

e =Error tolerance (sample error) (10%) = 0.1or 0.05

N = 240

Thus:

$$n = \frac{240}{1 + 240(0.05)^2} = 150$$

Except for agricultural experts, buyers and marketing people who were selected purposively using probability sampling. The selections of the respondents in each AMCOS category unit were determined proportionately.

$$n_h = (N_h / N) * n$$

Where n_h is the sample size for each category unit (AMCOS), N_h is the population size for each category group of respondents, N is the total population size, and n is the total sample size.

Findings and Discussion

The findings that follow are focused on marketing challenges and the financial success of cashew nut and other farm businesses. Trader techniques and factors that affect profitability are also explored. Hoverer, Age, sex, marital status, degree of education, and years of experience of smallholder farmers are the factors covered in this section. 150 Smallholder farmers who

wanted to participate in the survey were given a cross-sectional survey questionnaire. There were only 135 acceptable responses when fifteen (15) completed questionnaires went missing, resulting in a 90 percent response rate. According to Lakens (2022), a study with a response rate of more than 50% is always regarded as successful. As a result, the excellent response rate of 90% was crucial in helping to evaluate the study's findings and discussions.

Level of Education Small holder Farmers

The distribution of respondents by educational level is seen in Table 6. The study's findings indicate that farmers have gone to college and universities, with the majority of them (36.2%) having completed their primary education. Additionally, 24% have completed their secondary education, 14% have completed their certificate program, 12% have completed their diploma program, 6.6% have completed their degree, and 3% have completed their master's degree. However, this trend indicates that the majority of small-scale cashew nut farmers in the coast region have not attended any formal education at all.

Table 65:Level of Education

Category	Frequency	Percentage
Primary education	49	36.2
Secondary education	37	27.4
Certificate	19	14
Diploma	17	12.5
Degree	9	6.6
Masters	4	3
Total	135	100

Source: Field Data (2022)

Key Players in marketing cashew nuts

In Table 7 the distribution of respondents by the number of key actors in the marketing of cashew nuts is shown. These key players range from smallholders involved in the cultivation of cashew nuts to seasoned professionals who facilitate worldwide marketing. Governments play a 9.6% role in the study's findings, ministry of agriculture plays in marketing of cashew nuts in 8,1%, cashew nuts board play as key players in marketing of cashew nuts from small holders farmers on 28.1%, private sector also play as key players in marketing of cashew nuts to small holders farmers of cashew nuts on marketing of cashew nuts from small holders farmers on n 4.4%, primary cooperative society also played as a key players on 18.3%, individuals farmers

also is the one among of key players responding on the study which is finally, Union, which presented 24% as significant participants in marketing cashew nuts from smallholder farmers for international markets, is shown to be a key player in the marketing of cashew nuts in international markets at 7.4%. This demonstrates that small-scale farmers have a wide range of key actors they classify in the marketing of cashew nuts through small-scale producers of cashew nuts. The majority of respondents said cashew nuts boards were the most significant players in this regard.

Table 66:Key players in marketing cashew nuts

Category	Frequency	Percentage
Governments	13	9.6
Ministry of agriculture	11	8.1
Cashew nuts board	38	28.1
Private sectors	6	4.4
Primary cooperatives society	25	18.5
Individual farmers	10	7.4
Union	32	24
Total	135	100

Source: Field Data (2022)

Challenges faced by the indigenous small holder farmers in exporting cashew nut products in foreign markets

The study wanted to find out the challenges facing the small scale of cashew nuts in Tanzania to export their products in foreign markets whether lack of skill on international markets, lack of awareness on understanding the value of the products produced, affected with the environment which cashew nuts produced or lastly affected by middleman, the findings revealed that, the majority of the respondents such that 92 respondents which equal to 68.1% are affected by lack of skill on international markets, while 9 respondents which equal to 6.6% affected on lack of awareness on understanding the value of the product produced, about 5 respondents which equal to 3.7% responded affected with the environment which cashew nuts produced and lastly said 29 respondents which is equal to 21.4% responded affected by middleman.

However, findings precisely revealed that that lack of having skills and knowledge is the root cause of failure of having proper understanding of how their products have value to the international markets may be there is a needs for authority such as ministry of agriculture to

make much effort for those small scale holders of cashew nuts to be imparted the skills on how they can sell their products to the international markets for giving them procedures and better ways of cultivated their product in high quality to enhance them their products to have value and international standard in order to earn that international markets of their cashew nuts products and to achieve better profits to themselves and the government at large.

Table 67: Challenges facing the small holder's farmers of cashew nuts in Tanzania to export their products to international markets.

Category	Frequency	Percentage
Lack of skill on international markets	92	68.1
Lack of awareness on understanding the value of the products produced	9	6.6
Affected with the environment which cashew nuts produced	5	3.7
Affected by middleman	29	21.4
Total	135	100

Source: Field Data (2022)

Furthermore, when the some responded asked about suggestion from the respondents to improve the international markets of cashew nuts to the small-scale farmers/small holders of cashew nuts. Their response on this suggested that,

It supported to have the proper mechanism of foreign markets/international markets of cashew nuts to small scale farmers of cashew nuts, also to make sure that quality cashew nuts are produced, further more respondents responded that should have gain or imparted education concerning to agriculture modern technology, the government should provide equipment for the aim of helping peasants to produce quality cashew nuts which needed to the international markets

Numerous reports have claimed that buyers from nations other than India are uncertain about the auction procedure and hesitant to participate as a result. In 2012, there were some problems involving a USA customer who tried to buy stuff that was "remaining" after the core customers had satisfied their demands and was pushed out of the market. Lack of business skills. The World Bank estimates that small farms and natural growth account for 97% of the world's

cashew production, with planned plantations accounting for the remaining 3%. 2011 ITC Fact sheet

Use of ineffective local processing instruments, a lack of proper processing equipment and machinery, and a lack of funds prevent many people from following suggested processing techniques. The study also sought to determine whether a lack of modern technology had an impact on the output's yield and quality, and its findings indicated that the majority of small cashew nut growers in Bagamoyo and the surrounding coast region are impacted by inadequate technology in the cashew nut plantations.

Lack of investment, working capital, market knowledge, access to information about government regulations regarding the processing industry, dependable training facilities, and lack of government initiatives supporting processors of their products to the international markets are obstacles to market access. Globally, innovation at the cooperative level has naturally arisen between cooperatives for saving and credit and agricultural marketing, as well as innovation in value chain financing, where two organizations are dependent on one another. A crucial component of a successful company strategy is ensuring that all actors in the value chain have access to adequate and timely financial services. This funding may be provided in a variety of ways by other companies in the chain, banks, micro-finance institutions, or financial cooperatives (credit unions).

Therefore, it can be stated that the role of cooperative societies in the production of cashew nuts is important and cannot be disregarded, especially in rural areas where the majority of services are unavailable or provided inefficiently. Cooperative networks, however, have traits in common with complex organizations (Muller & Peres, 2019). Both are open systems that interact with other organizations and their environment and, as a result, shape and be shaped by them. They are both founded on relationships and interactions among the members. Cooperative networks uphold the open membership principle, keeping the organization's limits open to outside influence and a revaluation of its goals and methods of operation.

Although Tanzania's coffee business likewise uses an auction system, growers are able to sell their products to either private purchasers or cooperatives. So long as private customers (other than cooperatives) are permitted to buy the crops, there will be competition, which helps to maintain fair and market-reflective prices (Rwekaza & Anania, 2018). The existing state of the

cashew sector, according to Tanzania Warehouse Licensing Board (TWLB), results in cooperatives having a monopoly and lessens market competition.

However, the system could support additional players (like private buyers) if they weren't prohibited from taking part. It is easier to engage with them and work with them to satisfy needs that are universal because the majority of smallholder farmers in rural areas are organized into cooperatives (Harimaya&Kagitani, 2020)..Although Table 4.9's statistics indicate that the majority of small holders have average means of approximately 1.7852, they also suggest that the biggest obstacle to cashew nut production is a lack of skills.

The participant stated that:

“...Few marketing channels: The sole product now marketed worldwide is the raw nut, and India is the only big market. Due to the power this monopoly has given buyers, there is little to no space for negotiation. Farmers are being forced to very low margins in the raw nut market. Because we don't process it, our product only qualifies for one market, which has proven to be a challenge. A more expansive and diverse market might be made possible by local processing. The government is nonetheless investigating alternative markets for the export of raw nuts in the interim” (Interview held with participant on 29th May 2022).

Furthermore, some of the participants showed that weak primary cooperatives is the most challenges in performance of markets of the produce of casements. The participant stated that:

“.... Weak Farmer Organizations: Farmers' primary societies and cooperative unions have struggled to manage marketing activities. Most of them lack purchasing power and have poor staff that is committed and qualified. Generally, the environment is not very supportive to the existence of Co-operative Unions. The policy has continued to evolve while financial backing has consistently been scant or non-existent. Because they lack significant collective organizations to further their interests during the sale of their cashew nuts, cashew nut farmers have little negotiating leverage when dealing with traders. There is currently no efficient marketing information system in the cashew business. One cannot overstate how crucial marketing information is to farmers and traders in particular. Tanzania is the world's largest producer of cashew

nuts; thus, it needs a strong marketing information system that can track, evaluate, and communicate market and production trends to cashew stakeholders. The majority of stakeholders lack this crucial industry expertise....” ((Interview from primary cooperatives held with participant on 29th May 2022).

Conclusions

This study's primary objective is to investigate, the challenges faced by indigenous small-scale farmers in exporting cashew nut products abroad, and the development of relationships between indigenous small-scale farmers and cooperative unions. According to the study's findings, 68.1 percent of Tanzania's small-scale cashew nut farmers are affected by a lack of knowledge of foreign markets. The cashew nut marketing system was viewed as being generally ineffective and inadequate. As a result, development initiatives for cashews should focus on both the manufacturing technology gaps and the marketing issues

However, the results of the study show that, claimed that only a small percent of small holders of cashew nuts they are aware on the information to the accessibility of international markets about cashew nuts production so the government should support farmers on accessing productivity markets to the small holders farmers of cashew nuts especially to earn the international markets of their products and enhance them to achieve profitability. In order to improve the quality and yield of the output, the government must export workers to other successful countries in this industry so that they can learn the most recent technology suited to cashew nut plantations and then bring that technology back to their home country.

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The Contribution of Cassava Production and Marketing on Smallholder Farmers Livelihood in Dodoma Region, Tanzania

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Abstract

Cassava (*Manihot esculenta* Crantz) has remained a major source of food security for many countries in the world due to its ability to drought resistance and disease. This study intended to assess the contribution of cassava production and marketing on livelihood of smallholder farmers in Dodoma region of Tanzania. A sample of 240 cassava smallholder farmers was randomly selected from four districts in Dodoma region namely Kondoa, Chemba, Kongwa, and Mpwapwa districts. Quantitative data was collected through self-administered structured questionnaire from the study area. Focus group discussion (FGD), interview and observation methods also were used in collecting qualitative data. Also, the Documentary review was used to collect secondary data and the statistical package for social sciences (SPSS) was used as analytical tools for quantitative data whereas Nvivo software was used as analytical tool for qualitative data. On the other hand, Content analysis was used in analysing qualitative data collected through FGD and interview. Both descriptive statistics and inferential statistics were used to analyse quantitative data. Descriptive statistics were involved in the computation of means, standard deviations, Chi-Square, frequency and percent. To estimate the contribution of cassava production and marketing on famers' livelihoods, the Binary logistic regression was employed. The findings from this study indicated that family size, farmer's experience, land size, education and number of visits by extension showed a positive relationship with the improvement in the livelihood of famers in the selected districts. It recommended that, Ministry of Agriculture to increase the provision of best farming practices through employing more extensions.

Key words: Cassava production, Marketing, Livelihood, Dodoma, Tanzania

Introduction

Food production has been dramatically decreasing over the last two decades in most of Sub-Saharan Africa countries (SSA) resulting in falling in the standard of living of the majority population (Nyanda, 2016; Liberio, 2012). To overcome the problem of food shortage in developing countries, adoption of drought resistance food crops such as roots and tubers and the use of modern agricultural technologies such as improved seeds, use of fertilizers, pesticides, proper spacing and agricultural mechanization is imperative.

Cassava (*Manihot esculenta* Crantz) has remained a major source of food security for many countries in the world due to its ability to drought resistance and disease. Cassava's growth characteristics make it a suitable food security crop, particularly due to its resilience growing in conditions that become unfavorable for other crops, such as periods of erratic rainfall. At the Global level, Thailand and China are the largest cassava producers followed by Indonesia and Brazil. In Sub Saharan Africa, Nigeria is the leading cassava producer followed by Ghana, Republic of Congo, Tanzania and Mozambique (Mtunguja *et al.*, 2019). Nigeria cassava production contributed 19% to the world cassava output, 34% to that of Africa and 46% to the output of West Africa (FAO, 2015; Ewubare and Ologhadien, 2019). On the other hand, Thailand and Vietnam are currently being the two main cassava exporting countries in the world (Kim *et al.*, 2015) while Nigeria being the leading in Africa. Despite of these, yet most of Sub Saharan (SSA) countries are still struggling to achieve a sustainable supply of food commodities such as roots and tubers, cereal, and grain crops. Report by FAO (2019) indicated that, rural poverty, food insecurity and unemployment rates are continued to be high in these countries. For example, 23.2% of the population in SSA is food insecure and 48% of people in SSA live on \$1.90 a day, suggesting that poverty is still prevailing in these countries (Karfakis and Scambelloni, 2015). Currently, Africa only accounts 2.1 % of the world total cassava production and exports to which Tanzania ranked 8th in Africa with cassava production worth USD 369,000 is representing 0.63% to the total exports from Africa (FAO, 2020). The low volume of exports does not match to the projected global demand for cassava which is anticipated to rise at the rate of 1.8% for the period ranging between 2022 and 2027 due to increase in animal feeds, food and beverage consumption (FAO, 2020)

Cassava is an important subsistence food crop in Tanzania, especially in the semi-arid areas such as Dodoma and Shinyanga. In Tanzania, cassava is considered as a major source of food security for rural people due to its ability to grow in low-quality soil, its drought tolerance and disease, and its flexible cultivation cycle. The major producing regions in Tanzania include Coast, Kigoma, Tabora, Kagera, Mara, Geita, Mtwara, Dodoma, Lindi and Shinyanga. However, 84% of the total cassava production in the country is utilized as human food, the remaining percentages are for other uses like starch making, livestock feed and export. Both roots and leaves of cassava are of major nutritional importance in the country (FAO, 2020). Currently, cassava production in Tanzania is low as compared to the market demand which is projected to be 630,000 tons by 2020/2021 (Dodoma Investment Guide, 2018). The major sources for low productivity and production include the low level of utilization of cassava, lack of assured market and poor post-harvest handling techniques of cassava at farm level. These make cassava to be less competitive with other staples particularly in the urban areas where there are more markets for staple crops. Additionally, poor transportation infrastructure makes market accessibility by cassava producers difficult. The study by James *et al.* (2013) and Mtunguja *et al.* (2019) argued that, improvement in cassava productivity will only occur if reliable markets are introduced which could incentivize increased attention and resource allocation to cassava by farmers. Furthermore, the participation of smallholder cassava farmers in Dodoma is limited only to village and farm markets which could limit their income generation from cassava products and consequently the livelihoods (Dodoma investment Guide, 2018). In this regard, development of the cassava market is anticipated to contribute to improved food security and contribute sustainably to poverty reduction in poor households in the region.

The target market for Tanzania cassava and its products is on both the local and external markets which include the existing and the new emerging ones. Local markets targeted by this project will include rural households, farmers' cooperatives, urban markets such as small towns and big cities (like Dodoma city, Dar es Salaam city), cassava processing factories and local brewing industries. Moreover, the Dioceses of Central Tanganyika (DCT) and the Indian investor are in the final stage to establish the Ultra- Modern cassava processing industries in Hombolo ward in Dodoma region which is expected to create a potential emerging market for smallholder farmers in Dodoma. On the other hand, the current signed contract between Tanzania and China governments of exporting dried cassava to China through Qingdao port will

fuel exportation of cassava and be the catalyst of cassava production and processing in Dodoma region. Already 74 tons of dried cassava had been exported to China in this year (FAHARI TANZANIA, 2019). Other external markets included DRC, Mozambique, Burundi, Rwanda, Uganda and Sudan as currently these markets consume cassava from Tanzania.

According to the Dodoma investment guide (2018), the future demand for cassava in Tanzania it ranges between 530, 000 to 630,000 tons by 2020/2021. However, the market demand in the country is expected to grow more to worth \$66.84 billion by 2026, which is equivalent to 6.6 percent. The reported main driver of the increased demand is due to the high demand for cassava products in the local milling, animal feeds factories, and beer, beverage, sweets, and snacks, starch manufacturing industries. Moreover, the existence of current external emerging market from China and India which shown interest in establishing cassava processing factories in Dodoma will ensure the sustainability of the crop production. Basing on these facts, prioritization in cassava crop in Dodoma region will not only embrace the Tanzania Vision 2020/25 of transforming its economy through industrialization but also fit in the Sustainable Development Goals of No Poverty, zero hunger, Gender Equality, Decent Work and Economic Growth and Reduced Inequalities. Based on the fact that cassava crop is labour intensive, this will improve women and youth employability in the project area.

Research Problem

Dodoma region is characterized by drought due to semi-desert climate which is suitable for growing drought resistant crops like cassava. In according to Mlayet *al.*, (2017), the estimated land for cultivation in Dodoma region is 1,214,347.16 hectare (ha) while actual cultivated land was 826,275.00 ha (68%), the remaining unutilized land 388,072.16 ha (31%) which poses high potential for agribusiness investment in the region. In Dodoma region, cassava crop has the highest production potential compared to other staple food crops such as maize, paddy, sweet potatoes and beans (Mlayet *al.*, 2017). The average productivity of cassava in Dodoma region is 2.18 tons per ha followed by sweet potatoes and paddy crops with 2.02 and 1.91 tons per ha respectively. These results imply that there is a high potential for agribusiness investment in cassava crop in Dodoma region.

Based on the Dodoma Region (2015) report, Kongwa and Chemba districts have the highest productivity of 3.0 tons per ha of cassava crop for each district. This level of production is the highest productivity of cassava in all districts in Dodoma region (Table 1) as compared to other

districts. Other districts with potential for cassava production include; Kondoia (2.5 tons), Mpwapwa (2.5 tons per ha), Chamwino (1.6 tons per ha), Dodoma urban and Bahi 0.9 and 0.8 tons per ha respectively.

Table 1: Productivity of Cassava Crop in Dodoma Region

S/N	District	Planted Area (Ha)	Harvest (Tons)	Productivity Tons/ha
1	Kondoia	2,506	6,265	2.5
2	Mpwapwa	841	2,124	2.5
3	Chamwino	5,105	8,168	1.6
4	Dodoma Urban	2,013	1,812	0.9
5	Bahi	10,008	8,007	0.8
6	Chemba	8,652	25,806	3.0
7	Kongwa	2,356	7,067	3.0

Source: Dodoma Region (2015)

Despite this productivity of cassava crop in the region, yet its production is not at the notable quantity in most of the potential areas. The Dodoma region report (2015) reported that, cassava production in Dodoma stood only at 59,249 tons. This quantity of cassava produced in the region is less as compared to what is demanded in country (530,000 tons) and in contrary to the government intention of eliminating hunger and poverty among rural population. Moreover, it should be also noted that cassava crop is a multi-purpose crop which is both a cash crop at the same time the food crop in the sense that it can be used as fresh roots, dried roots, traditional flour as well as vegetables. Given the fact that Dodoma region is characterized by drought due to semi-desert climate, promoting cassava production which is drought resistant crop will be of great importance for poverty reduction. This is because, Dodoma region is among the regions which have high rural poverty level (NBS, 2014), and the need for understanding and prioritize in cassava crop on how can improve food security and income generation among smallholder farmers in the region is of paramount important.

Objectives

General Objective

The main objective of this study is to investigate the contribution of cassava production on

smallholders' food security and livelihood in Dodoma region

Specific Objectives

The study intended to achieve the following specific objectives:

- a. To examine the current state of cassava production in the four selected districts in Dodoma
- b. To assess the contribution of cassava production and marketing on the livelihood of smallholder farmer in Dodoma
- c. To examine the challenge facing cassava smallholder farmers in Dodoma region

Literature

Theoretical Review

The study was guided by the theory of sustainable Livelihoods is drawing the conclusion of contribution of cassava production and marketing on smallholders' farmers livelihoods.

The Theory Sustainable Livelihood (TSL)

This study was underpinned by the Theory of Sustainable Livelihood (TSL) which is a multidimensional, integrated and rational approach which fit best on the analysis on the improvement of livelihood for poor smallholder farmers such as cassava producers in which the improved livelihood originated from the production could contribute to poverty eradication (Kamarrudin and Samsudin, 2014). The TSL provides the key components necessary for analysing livelihoods of individuals and groups of farmers in terms of capital assets, human assets, livelihood strategies and livelihood outcomes as the key elements for assessing the contribution of policy intervention in the production and marketing process. The theory/approach stress the livelihood as an important component for improving smallholder's livelihoods in terms of satisfying cultural, social, economic and environmental needs of present generations as well as future generations (Chambers and Conway, 1991). Therefore, it is thought that, an understanding the households' livelihood outcome it was important to understand how smallholder farmers utilize the livelihood capabilities and assets to achieve the desired livelihood outcomes in terms of increased household income, sustainable use of resources, reduced vulnerability, empowerment and ownership of household assets as qualified by DFID (2001). In this study, land owned by cassava farmers, capital invested, labour effort and entrepreneurial skills by smallholders are valuable assets and capabilities that give famers'

ability to exploit cassava production opportunities in the sector. This is to say, if such assets and capabilities are rationally used there is a likelihood of cassava smallholder farmers to improve both food security and livelihood in Dodoma

Empirical Review

Study conducted by FAO (2016) reported that, the Sub-Saharan Africa is the only region where the average food supply (measured in calorie intake) is below the average daily requirements for adults. This only could be overcome if the production of crops like cassava and other tuber roots crops is given more emphases by both government and private sector. Moreover, Mlay *et al.* (2017) reported that, the productivity of cassava is high in Dodoma, but the volume of cassava produced by smallholder farmers is less than what is needed at the market. This implies that there is higher investment potential in cassava production in the region.

Report from Dodoma region (2018), argued that, cassava production in Tanzania and other SSA is at the lowest level as compared to other regions such as Asia and America. The major sources for low productivity and production include the low level of utilization of cassava, lack of assured market and poor post-harvest handling techniques of cassava at farm level. The same study further argued that, cassava production in Tanzania currently is low as compared to the market demand which is projected to be 630,000 tons by 2020/2021.

On the other hand, FAHARI TANZANIA (2019) reported that, there is a growing demand from external markets on the consumption of cassava from Tanzania. The main countries include China, DRC, Burundi, Rwanda, Uganda and Sudan and already 74 tons of dried cassava had been exported to China in 2018.

Conceptual Framework

The study conceptualizes that; cassava is a potential source of employment and income generation which in turn could improve their livelihoods in Dodoma region. The improving of livelihood will be the function of more investments in the production and marketing functions as well as factors influencing production and marketing of cassava in the region. On the other hand, supportive government policies on agriculture such as inputs subsidization and trade promotion will facilitate the trade participation among smallholder farmers in the region. This in other hand will increase the sources of income and thus leads to improvement of their livelihoods which will be observed in more acquisitions of assets.

Figure 1 present the conceptual framework of this study in which various inter-linked variables are shown. Three concepts are presented in the figure which includes cassava production, marketing and farmers' livelihood and how each other interact to improve livelihood. The farmers' livelihood is treated as independent variable which depends on the production, marketing and supply of cassava. On the other hand, independent variables which are the constituents of cassava production are thought to contribute to food security and farmers' livelihood. It is through this inter-related relationship, the contribution of cassava production as independent variables resulted into increased food security and improved cassava farmers' livelihood. Arrows in the conceptual framework indicate the flow of the relationships among variables under the study

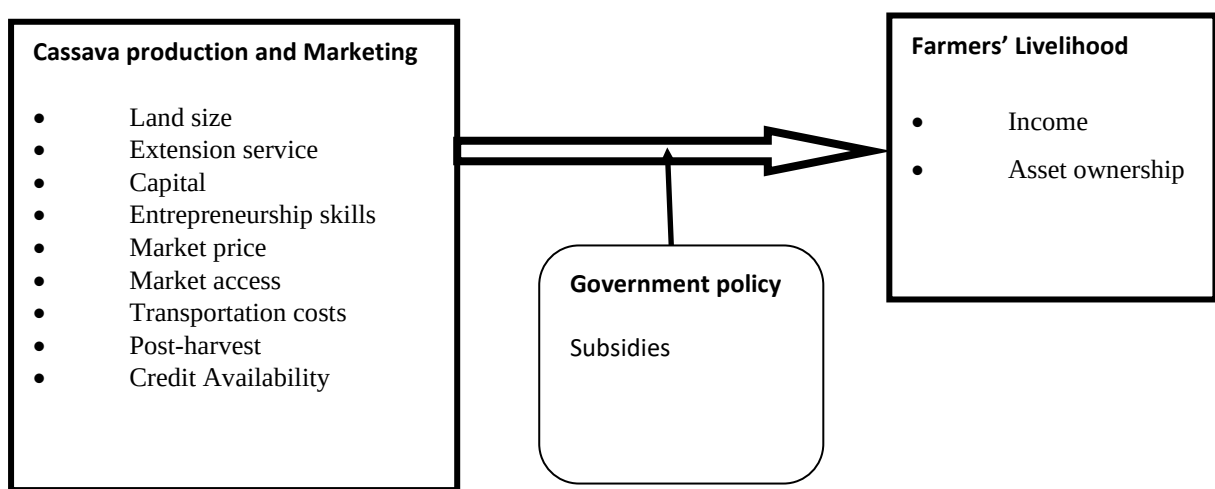


Figure 1: Conceptual framework of the study.

Method

This study was conducted in Dodoma region particularly in four districts namely, Chemba, Kongwa Mpwawa and Chamwino. The selection of the four districts is based on the fact that, they have higher cassava productivity (3.0 and 2.5 ton per ha) as compared to another district in the region. Also, currently Dodoma is implementing the project of cassava promotion in all its seven districts. Dodoma is among of the districts in Tanzania with high level of poverty especially in the rural areas (NBS, 2014).

Research Design

A cross sectional design was used in carrying out the study as data were collected from the respondent at one point in time and draw the conclusion regarding the unit of analysis.

Participant (Subject) Characteristics

The study involved small scale farmers as key participants in this study originated from the four districts of Dodoma region namely Chemba, Kongwa, Mpwapwa and Chamwino. The smallholder cassava farmers with ownership of land size ranging from 0.5 to 2.5 ha were included in this study. This group is the one which their livelihood is highly depend on the income generated from farm activities.

Sampling Procedures

Multi stage sampling technique was used in the selection of households engaging in cassava production in Dodoma region. At the first stage, Chemba, Kongwa, Mpwapwa and Chamwino districts was purposefully selected due to their high cassava production potential in the region. In the second stage two wards from each district was selected using a purposive sampling technique based on their high cassava production potential. In the third stage two villages from each selected ward in the four districts was randomly selected and involved. This makes 16 villages to be involved in the study through which the sample size was generated. Finally, a sample of 240 cassava smallholder farmers was proportionally selected using the lists of cassava smallholder farmers obtained from the village and ward leaders. On the other hand, interview with key informants (Traders, Extension officers, Cassava Farmers' Association Leaders, Cassava Processors, large scale cassava farmers) was used to capture detailed data related to cassava production in the study area.

Sample Size

A sample of 240 cassava smallholder farmers was determined using Cochran formula (1977) and included in the study as unit of analysis. This sample size is thought to be adequate and representative to the population in the four districts based on the rule of thumb that a sample of 30 respondents is enough for drawing conclusion on the problem under study.

Methods of data collection and instruments

The self-administered questionnaire with closed and open-ended questions was used in collecting quantitative data from smallholder farmers in the study area. To capture the food security and livelihoods, questions seeking to capture the level of income and assets ownership by cassava producers was formulated, in distribution (middlemen), in markets (traders of mangoes) and in mango processing industries in Dodoma. The Focused Group Discussion (FGD) was undertaken to capture the general attitudes and behaviour of cassava producers and other

stakeholders on the matter related to cassava production. Four FGD was be organized and conducted in the four selected wards in the study area. On the other hand, in depth interview guided with unstructured questions were used to collected qualitative data from key informants. Also, data from secondary sources was collected through documentary review method. This involved reviewing various reports from districts and region which are related with the cassava production

Data Analysis

Qualitative data

Content analysis method was used in analysing the qualitative data collected through depth interview and FGD (objectives i-iv). During analysis, qualitative data recorded in note books and voice recorder was transcribed into written text in the MS word and then later relevant and specific themes were developed from transcribed data. Then, discussion, arguments and interpretation of qualitative results was made and the results matched with the existing literatures and theories which support or contradict the results.

Analytical Model Specification

The quantitative data collected through questionnaires was coded and analysed with the help of Statistical Package for Social Science (SPSS) version 23 and MS Excel. Both descriptive statistics and inferential statistics were employed in analysing quantitative data. Descriptive statistics for objectives (i) and (iii) included means, minimum, maximum, range, Chi-square, percent, tables and bar graph were used to present results. To assess challenges facing cassava smallholder farmers (objective iii), multiple responses was performed to determine cases of occurrence responses. To analyse the contribution of cassava production and marketing in improving smallholder framers' livelihood, the Binary logistic regression model was applied since livelihood was treated as a dummy variable of 1= high and 2= low. The Binary logistic regression model is presented using equation as hereunder:

$$\Pr(Y_i = \frac{1}{X}) = \beta_0 + \beta_1 Es_1 + \beta_2 LS_2 + \beta_3 Es_3 + \beta_4 CI_4 + \beta_5 Mk_5 + \beta_6 Pr_6 + \beta_7 Ag_6 + \beta_7 SE_7 + \beta_8 Tc_i + \beta_9 FE_9 + \varepsilon_i$$

..... (1)

Where by: Y = Farmers' livelihood, LS₂ = Land size, Es₃ = Extension services, CI₄ = Capital invested, Mk = Market access, Pr = Price of cassava, Ag = Respondents' age, SE- Sex of

respondent, Tc = Transport cost, FE= Farmers production experience, β_0 = coefficients estimated in the model.

Results And Discussion

Descriptive results

Demographic Characteristics

Demographic characteristics of small holder cassava farmers from the four selected districts such as sex, age, marital status, household size, education level, farming experience and land size were analysed. The descriptive findings based on these demographic features are presented in the Table 1.

Finding from Table1 indicate that, most of famers (83%) were male and few (17%) were female. The implication of this results depict that cassava production in the selected districts is dominated by male. This is because in most of developing countries land is owned by male and therefore much of the activities related to farming fall under their ambit. The findings concur with those of Enete and Igbokwe (2015) who found that, cassava production in Nigeria is dominated by male.

Table 1: Characteristics of Respondents (n=240)

Variables	Frequency	Percentage
Sex		
Male	200	83.3
Female	40	16.7
Level of education		
No formal education	10	4.2
Primary education	102	42.5
Secondary education	93	38.8
College / University	35	14.6
Marital Status		
Married	204	85.0
Single	12	5.0
Widowed	12	5.0

Divorced	2	2.5
Source of Cassava Labors		
Family	147	61.3
Hired labour only	22	9.2
Family and hired labours	71	29.6
Source: Field Data (2022)		

In regard to education, majority (43%) of farmers are primary education holders followed by secondary school education (38%). Only few famers attained the college or university education in the study area. This indicates that, smallholder farmers involving in cassava production are not highly educated as compared to other countries like Kenya and Nigeria. On the other hand, about 85% of the smallholders' farmers in the region are married and only 5% are single while others are divorced and widowed. The findings are in line with those of Nyanda (2016) and FAO, (2020) who found that majority of smallholder farmers in developed countries like Tanzania are holder of primary and informal education.

Results as presented in Table 1 further show that, family member were the main source of labour in the study area. About 61% of labors participated in cassava production and marketing in Dodoma region were sourced from the family. These findings are justified by the higher contribution of family size on the livelihood of smallholder farmers in the inferential results from this study.

Current Status of Cassava Production in Dodoma Region

Results as presented in Table 2 show the production of cassava in the four selected districts for the period of two years (2021-2022). The findings show a decline trend in cassava production in the selected districts for the period of two years. This could be explained by the shortage of rainfall in the years 2022 which resulted into poor productivity in cassava production. The finding concurs to those found in the report of Dodoma Council (2018) that, cassava production in Tanzania currently is at the low rate as compared to the market demand which is projected to be 630,000 tons by 2020/2021. The mismatch between production and market demand could be explained by the climate changes (drought) which affect the region.

Table 2: Current Cassava Production in the selected study Districts in Dodoma Region

Name of District	2021 (Tons)	2022 (Tons)
Chamwino	9,751	4,320
Mpwapwa	24,378	10,800
Chemba	29,253	12,960
Kongwa	30,282	14,456
Total	93,664	42,536

Source: Field data

Inferential results

Results from the Logit model as presented in Table 3 show that, six variables out of nine involved in the model were significantly explaining the improvement of the livelihood for smallholder farmers in Dodoma region. Family size, Farmer's experience, land size, Education and number of visits by extension showed a positive relationship with the improvement in the livelihood of the farmers in the four districts.

The increase in the number of households at the family has shown to improve the life of famers in the selected districts in Dodoma. The increase of one person at the family could leads to 70% increase in welfare of cassava producers in the study area. The reason could be explained by fact that, farmers' sources of labor is from the household, so having more members implies more cassava production which in turn more income. The income generated from cassava can be a good source of improving their livelihoods through improved houses and other assets. These finding are justified by descriptive results whereby most famers reported to depend labors from the family. The findings are similar to those of Maziku and Mashenene (2020) who found the similar results in Songwe region in Tanzania. Similarly, having a larger family size means that more family labor could be available for cassava production and marketing which could enable easily adoption of cassava agronomic practices (Nwaobiala, 2015,; Saediman *et al.*, 2019).

Table 3: Contribution of Cassava production and marketing on farmers' livelihood

Variables	Coefficient	S.E.	Wald	Sig.	Exp(B)
Family Size	.703	.267	6.919	.000	2.021
Land size	.285	.212	1.808	.036	1.610
Experience in Production	.322	.037	1.338	.051	1.022
Cassava Variety	-.018	.141	.016	.901	.983
Extension visit to farmers	.411	.143	1.604	.037	1.518
Age of respondent	-.008	.022	.121	.728	.992
Level of Education	.006	.208	.001	.056	1.006
Price of cassava	.000	.000	.441	.507	1.000
Constant	-.956	1.429	2.448	.003	1.384
Cox & Snell R Square	.043				
Nagelkerke R Square	.054				
-2 Log likelihood	307.79				
Hosmer and Lemeshow Test	0.748				

Farmers' experience showed to have a positive relation with livelihood improvement with a coefficient of 0.322. This implies that, for every increase in the experience by the farmers in production, could improve their lives by 32 % in the region. The finding were in harmony with that of Saediman *et al.* (2019) who reported that sufficient farming experience can increase technical efficiency in cassava production and thus generate more income to finance their daily transactions.

Similarly, farmers with large land shown to have better life than farmers how own less land. This is due to reason that, having lager land could imply more outputs of cassava that can be used for home consumption and surplus for marketing. The sold amount of cassava will attract more income which is used in purchasing assets and paying school fees for their children. These findings supports those reported by Mlay *et al.* (2017) that, in Dodoma region production of staple foods were increased with the number members at the family. Saediman *et al.* (2019)

Finding (Table 4) further indicate that, farmers who were visited by extenstionist more frequency shown to improve their lives more than others who were not visited, due to the reason

that farmers who have visited they have more knowledge and can implement best agricultural practices. This results concurs with those of Mtunguja *et al.* (2019) demonstrated that improvement of cassava productivity for local cassava varieties in Tanzania was achieved through good agronomic practices by the majority of farmers. This implies that, if smallholder farmers are knowledgeable on the best farming practices they could improve the production and generate more income which can be used for purchasing durable assets. Studies have further shown that the adoption of high yielding varieties and better farm management practices could more than double the profitability of smallholder farmers' cassava crop.

Moreover, education was positively and significant related with the improvement of farmers' livelihood with a coefficient of 0.006. This implies that, famers with higher level of education were more likely to implement best production practices which resulted into increased outputs and thus more income. The finding supports that of Maziku and Mashenene (2020) that smallholder farmers in Songwe who were having more education level indicated to produce more maize as compared with low level of education.

Challenges facing smallholder Farmers in the study area

Results from Table 4 indicated that, famers in the selected districts were constrained with a number of problems in their cassava production. Presence of pests and disease, poor planting spacing and limited planting materials were mentioned by the majority of famers to be the more challenging problem in the study area. On the other hand, drought was the list challenge in the region due to the fact that Dodoma is one of the semi-arid areas so farmers they have adopted different strategies to the climate change.

Table 4: Challenges Facing cassava farmers in Dodoma region

Challenges	Responses		per cent of Cases
	N	Per cent	
Prevalence of pest and diseases	240	21.7%	100.0%
Inadequate of planting materials	240	21.7%	100.0%
Drought	165	14.9%	68.8%
poor quality of planting spacing	240	21.7%	100.0%
Lack of market for cassava	220	19.9%	91.7%
Total	1105	100.0%	460.4%

Source: Field Data (2022)

Conclusion and Policy Recommendation

Based on the findings from this study it can be concluded that, numbers of people involved in cassava production at the family, experiences of farmers, size of land owned and the number of visits by the extensions were having a positive contribution on smallholder farmers' livelihood in Dodoma region. Thus, the study recommends specific intervention should be implemented by the government through the Ministry of Agriculture to improve the service on cassava production and marketing. These will include the provision of extension services so as to improve the production and supply side particularly for smallholder farmers. To overcome the challenges associated with production and marketing, the study recommend employment of more extensions and establishment of more marketing centers and plants. These will create market outlets for the produced cassava in the region.

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Contribution of Cross Border maize trade in improving Households' Livelihood at Mutukula border, Tanzania

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Abstract

This study was intended to assess the contribution of cross border maize trade in improving households' livelihood outcome at Mutukula border, Tanzania. The research objectives were to examine the size of cross border trade at Mutukula border, to analyze the social economic benefit of cross border trade of maize at Mutukula border, to assess the effect of maize trade on trader's livelihood and examine the challenges facing traders in carrying out Cross Border of maize trade at Mutukula Border. Cross-sectional research design was used, 109 maize traders were selected for the sample using random sampling. Major findings of the study include cross border trade of maize has improved the household's livelihood since has enabled people to generate income, employment opportunities and able to accommodate social welfare like education to their children and health care. Furthermore, study recommended that the government should facilitate the total free movement of persons by reducing non-tariff barriers to promote cross border trade.

Keywords

Cross Border Trade and Households livelihood

Introduction

Background of the study

African Sub-Saharan Economic relationships have existed for ages. Regular border crossings by traders for the exchange of goods and services have led to intense flows that make up a sizeable share of the continent's overall trade. According to some estimates, cross-border trade today

contributes significantly to the economic and social landscapes of Africa, making up around 43% of the continent's overall wealth. Including for poor and marginalized communities, this kind of trading promotes livelihoods and generates employment prospects (Wanjiku *et al.*, 2012; Kivuva and Magara, 2012; Ama *et al.*, (2013).

Cross-border trade in food staples among East African countries is critical for achieving regional food security, income for traders, and nutritional security. It is also important for poverty alleviation. Food markets, in particular, ensure income for farmers/traders, a sustainable and affordable supply of food for consumers, and job opportunities for the entire economy. Food staple trade flows are influenced by factors such as comparative advantage in production, demand dynamics, and growing season differences.

In the 4th quarter of 2021, the Eastern Africa area traded over 157,000 MT of maize (October to December). The traded volumes were equal to fourth-quarter 2020 and 15% below the most recent 5 years average of fourth quarters, although being 17% higher than the previous third quarter. Kenya, Rwanda, and South Sudan together accounted for 88, 5 and 4 percent of all imports, while Tanzania and Uganda contributed 90 and 7 percent of exports, respectively. (Karugia *et al.*, 2009).

Despite the clear advantages of cross-border maize trading, certain concerns remain unsolved, including the scope of the cross-border trade and how the maize tradeoff affects traders' lifestyles. The reason for this is the existence of unrecorded cross-border trade data. Aside from that, trade restrictions continue to exist (Karugia *et al.*, 2009).

With the region's fastest-growing economy, Tanzania, its neighbors offer a convenient market for its goods through a combination of formal and informal cross-border commerce, both of which are essential for the growth of the Tanzanian economy (LETSEMA EAST AFRICA, 2021). Following the closure of the Rwanda-Uganda border in 2019, Tanzania solidified its position as Rwanda's primary supplier of food supplies by increasing its shipments to the country to 202 percent over normal. Due to restricted supplies caused by the drought in the previous two seasons, maize exports from Ethiopia to Somalia were likewise 85% above average.

Tanzania has many borders used by traders in the movement of goods, including Holili Namanga, Rusumo, Mutukula, and Tunduma. The magnitude of these cross-border trades, the impact of maize tradeoffs on traders' lives, and the difficulties faced by cross-border maize traders at Mutukula are all unknowns at this time. Despite the fact that agricultural trade is

permitted, maize is mostly transferred both formally and unofficially across borders, according to the literature (Ama et al., 2013; Jawando et al., 2012).

Cross-border trade in food staples especially maize among East African countries is critical for achieving regional food security, income for traders, and nutritional security. It is also important for poverty alleviation. So the study based on how Cross Border trade of maize has contributed in the improvement of household's livelihood at Mutukula border.

Significance of the problem

Due to existence of unemployment and poverty confronting the society at the border, there is the need for the promotion of livelihood activities that make positive impact on the lives of the people. So the study observe the interest in looking at social development enterprise that people could engage in, in order to meet their households needs and reduce their vulnerability to poverty. Cross border is one such livelihood activity that could be considered.

Objectives

The main objective of this study was to assess the contribution of cross border maize trade in improving household's livelihood outcome at Mutukula Border. Understanding the contribution of cross border trade of maize will help the decision maker/ government to understand the social economic benefit of cross border trade of maize which will result to the improvement of business environment at the border.

Literature Review

Definition of Key Terms

Cross border trade refers to trading activities where small-scale traders travel to neighboring countries for short periods of time to buy goods, usually from the formal retail sector and wholesale outlets to bring back to their home countries (Kachere, 2011).

Households is defined as the scene of economic allocation, arranging collectively for food, clothing and shelter of its member and seeking to provide for these needs over the long-term with some measure of security against uncontrollable disruptions of the climate market economy and the state (Chani, 2008).

Livelihoods refer to strategies that people use in terms of production and consumption in order to meet their daily needs and expectations (Long, 2004).

Empirical literature review

Cross-border trade, particularly in Africa's borderlands, many households and communities depend on it for survival. Taking advantage of regulatory and commodity price differences,

cross-border traders purchase and sell a variety of manufactured and agricultural items. At the same time as they sustain their families and educate their children, they also create a significant dispersed distribution system that enhances regional food security (Afrika and Ajumbo, 2012; Brenton et al, 2013; Titeca & Kimanuka, 2012)

Cross Border Trade benefits not only producers and traders linked with the value chain but also creates business opportunities for marketing services providers such as processors, transporters, storage facility provider and market facilitator such as product grader and market information collectors and disseminators. Also contribute to the economies in various ways, since it enables small scale entrepreneurs to escape poverty and to meet the education, housing and other basic needs. The income from Cross Border Trade can be another source of saving and capital to startup or strengthen alternative livelihood activities which provide more income, employment and security for the household (World Bank report, 2007).

According to Jawando et al, 2012 show that cross border trade has risen as a result of confronting poverty situations in particular country contexts. Such fragility in the social-economic conditions of society force people into entrepreneurship.

Kachere, 2011 contends that the basic concept of poverty, which is the inability to attain the necessities for survival, has transcended various generations and has led to people engaging in cross border in their quest for survival.

Kuhlengisa, 2013 reports that rising poverty level and unemployment have affected people's ability to provide for households needs and necessities. So, this drives people to engage in livelihood activities that will ensure that they survive; cross border trade is one among the activities.

Theoretical Framework

This study utilized the Sustainable Livelihood Approach (SLA) as theoretical literature review for the study. The adoption of SLA allowed for broader determination of the interplay between cross border trade and its potential as a strategy for meeting households needs. This was made possible because SLA aims to identify peoples strengths, assets, livelihood activities and the opportunities that people have as well as the factors that shape those livelihoods (Long, 2004).

According to Gambe, 2015 SLA is useful in understanding poverty and the set of action and principles that can be adopted in order to overcome poverty. Similarly, Cooper and Brill, 2009 contend that SLA aids in the understanding of poverty and the intervention strategies that can be

employed in improving the lives of people living in poverty. Guided by the SLA framework, the researcher contextualized poverty and cross border trade as a potential livelihood strategy for meeting households' livelihood in Mutukula border. SLA thus provided an understanding of the risks that cross border traders face, as well as the energies, assets and abilities that they possess. Assets and abilities are fundamentally crucial in ensuring that the traders utilize cross border trade as a livelihood strategy.

SLA deviates from the modernization theory which advocates for economic growth as a key phenomenon in poverty reduction (Krantz,2001). Instead, the SLA highlights that poverty and unemployment can be effectively abated by sustainable livelihood. The concept of sustainable livelihood is an attempt to go beyond the convectional definitions and approaches to poverty reduction which have been found to be too narrow because they focus only on certain aspects and manifestations of poverty such as low income without considering other aspects such as vulnerability and social exclusion (Krantz,2001).

Methodology

Research design

This study used a cross-sectional research design. The cross-sectional research design was chosen because the researcher collected data once. Means that once the data collected to the traders the researcher won't collect again the data.

Study Area

The study was carried out in Tanzania- Uganda border in Mutukula, Kagera region. The reason behind selection of Mutukula border was giving researcher easier in the accessibility of data in relation to time and resources required to accomplish the work and the extent of the problem compared to other place in the study area.

Study population

The study considered the whole cross border traders of maize products. Therefore, population for this study was 150 traders who were found at Mutukula border.

Maize traders were the target group of which sample size of 109 maize traders was selected from the group of 150 maize traders found at Mutukula Border. The sample was selected randomly from the list of maize traders in order to get the target group for data collection.

Sample size

Sample size of 109 maize traders was selected from the group of 150 maize traders found at Mutukula Border by using Yamane formula as shown below

$$n = \frac{N}{1 + N*(e)^2} \dots\dots\dots (1)$$

Where: n = the sample size

N = the population size

e = the acceptable sampling error (5%)

Data collection methods

Both questionnaire and interview were employed during the study. Both qualitative and quantitative data were gathered using questionnaires. The traders discovered at the Mutukula border were given the questionnaire for this investigation. Also interview approach was chosen since it aids in explaining, better comprehending, and exploring the beliefs, actions, experiences, and phenomena of research participants; hence, an interview guide with open-ended questions was produced.

Analytical Model

The data collected were analyzed by using the program known as SPSS. As a consequence, descriptive analysis was performed and the results were presented using frequency and percent to indicate the respondent characteristics and the Social- Economic Benefit of cross border trade of maize, multiple responses was used to analyze challenges facing traders in carrying out Cross Border of maize trade at Mutukula Border and the effects of maize trade on trader's livelihood was analyzed by using multiple linear regression analysis. Where by the following formula was used:-

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots\dots\dots (1)$$

Whereby;

Y= Household livelihood outcome

β_0 = Constant

β_1, β_2 and β_3 = Beta coefficients

X_1 = Exchange rate

X_2 = Competition

X_3 = Inflation

Results and Discussion

Social Demographic Characteristics of Traders

The social demographic characteristics of the traders based on age, gender, educational attainment, marital status, and citizenship.

Table 68: Social demographic characteristics of traders

Characteristics	Categories	Frequency	Percent
Age	23-30	19	17.4
	31-38	27	24.8
	39-48	46	42.2
	49-56	10	9.2
	56+	7	6.4
Sex	Male	71	65.1
	Female	38	34.9
Education level	Primary level	56	51.4
	Secondary level	32	29.4
	Tertiary level	21	19.3
Marital status	Single	15	13.8
	Married	80	73.4
	Separated	14	12.8
Citizenship	Tanzanian	74	67.9
	Ugandan	35	32.1

Age of respondents

Age was one of the social demographic factors evaluated during the study, and the data from (Table 1) above showed that the majority of respondents—46 (42.2%)—were in the age range of 39–48, 27 (24.8%)—in the range of 31–38, 19 (17.4%)—in the range of 23–30, 10 (9.2%)—in the range of 49–56, and 7 (6.4%)—in the range of 56. This is in the line with findings of Peberdy and Crush, 1998 who also observed that the middle-aged individuals were the main cross border traders. This may be linked to the problem of high unemployment among this age.

Sex of respondent

According to the study's findings (Table 1), 38 (34.9%) of the respondents were female, while 71 (65.1%) were men. This means that most of the respondents were male due to the traditional norms in which female were not allowed to engage in the activities far away from their home.

Level of Education

The bulk of the respondents who participated in the cross-border trade of maize have secondary level education, accounting for 56 (51.4%), followed by primary level education for 32 (29%), and tertiary level education for 21 (19.3%). This finding showed that more traders had secondary education level as it gave them an advantage on record keeping, credit access, getting

information of sources of maize supply and knowing their customer needs over those who did not reach secondary level. Masinjila (2016), believed that secondary school education was necessary for meaningful cross-border trade to take place.

Marital Status of respondents

The bulk of the respondents who participated in the cross-border trade of maize have secondary level education, accounting for 56 (51.4%), followed by primary level education for 32 (29%), and tertiary level education for 21 (19.3%). This finding showed that more traders had secondary education level as it gave them an advantage on record keeping, credit access, getting information of sources of maize supply and knowing their customer needs over those who did not reach secondary level. Masinjila (2016), believed that secondary school education was necessary for meaningful cross-border trade to take place.

Citizenship

One of the questions that this research wanted to answer is the Citizenship. Results on this variable shows that were 67.9% Tanzanian while Ugandans 32.1%. This means that most of the respondents were Tanzanians. This finding is consistency with the expectation since the study was conducted to the Tanzanian side where most of traders were Tanzanians.

Social- Economic Benefit of cross border trade of maize

Social economic benefits which obtained from engaging on cross border trade of maize. Benefits cited for participating in Cross Border trade of maize include income generation, self-employment, able to fulfill the social welfare which include education, health services and food security. Cross Border Trade plays a vital role in poverty reduction, employment and income opportunities. It is a vital source of livelihood for the poor and an important component of Africa's economy contributing immensely to the economy of Africa. It is also a source of employment for traders and their relatives.

Table 2: Social economic benefit of cross border trade of maize

	Frequency	Percent
Income generation	78	71.6
Self-employment	30	27.5
Social Welfare	10	9.2
Total	109	100

Income generation

The majority of respondents representing 71.6% revealed that they use cross border trade of maize has helped in improving their household livelihood which they use those income generated for meeting their family basic needs like paying house rent and school fees for their children.

Self-Employment

Cross Border trade of maize plays a vital role in poverty reduction, employment opportunities. It is vital source of livelihood for the poor and an important component of African's economy contributing immensely to the economy of Africa. It is also a source of employment for the traders and their relatives (Mijere, 2006). A significant proportion, 27.7% of the respondents were of the view that Cross Border Trade of maize is a good practice and should be promoted because it has helped them to come out of the unemployment and recognize it as their main occupation.

Social Welfare

Cross Border trade of maize enhanced income revenue and provided employment opportunities for poorer households to meet their basic needs related to social welfare such as education and health care. An assessment of respondents' views indicated that Cross Border trade of maize impacted positively social development aspects such as education and health care.

Challenges facing cross border maize trade at Mtukula Border

The study in Mutukula requested information about the challenges they faced when conducting cross-border trade at the border. During the interview, a number of problems were brought up, including a lack of access to credit, a lack of market expertise, inadequate infrastructure, delays of permit and high costs (Table 3).

Table3: Challenges facing Cross Border of maize traders

Challenges	Response	
	N	%
Lack access to credit	87	23.2
Lack of market information	83	22.1
Poor infrastructure	99	26.4
Delay of permit	1	0.3
High fees imposed	105	28

Infrastructure

Results findings revealed that majority of the traders were claimed poor infrastructure 26.4% to be the most challenges that they face during cross border trading. This implies that traders took much time to reach at the border due to the seasonal rainfall, which damages the road and constraint the maize to reach at the border. This resulting into loses in terms of the income hence the maize arrives late at the border. High cost of operation and returns to investment is reduced which results to small profit margin. Comparing this to the research by (Paul and Soprano, 2018) Infrastructure for internal and cross-border transportation may raise the cost of doing business and directly impact investment and commerce. Reduced trade costs can also have an indirect effect on increased foreign direct investment (FDI), primarily through intra-firm vertical integration across borders that takes advantage of each location's comparative advantages. Such increases in FDI can then further increase regional trade, enhancing the direct impact of trade expansion.

In adequate access to credit

Inadequate access to credit was the challenge which constitutes 23.2%. this implies that most of the traders needs credit in order to expand their business due to the risk and involved at the border as well as lack of financial institution at the border hindered the accessibility of the traders to obtain the credit. Lack of access to formal credit facilities by traders may explain why the large percentage of informal traders functioned on a small scale. The traders' functions were also not specialized. One of the reasons why most informal traders were unable to obtain formal credit from banks could be a lack of acceptable collateral. They may have also lacked the ability to negotiate for such loans, or the cost of securing the facility was cost prohibitive (Ogalo, 2017; Zata, 2016).

Lack of market information

The underperformance of the cross-border trade in maize was also attributed to a lack of market knowledge. The absence of knowledge about the market at the border may prevent traders from selling their corn as anticipated. Traders are not well equipped with the size of the market available the price of the particular trade now, which will enhance them to supply the maize as it, was expected. This study is similarly with the Traders and farmers require market information to help them plan and execute their market strategies. They need details about costs, standards, grading, and selling of units. Farmers and dealers must be able to choose where and when to buy and sell their goods because prices fluctuate and differs significantly from region

to region, country to country, and season to season. Such decisions are facilitated by information flows (Ogalo, 2017; Zata, 2016). Therefore, this is contrary with the study by Ruiter and Hadley, 2017, many cross-border traders regularly operate under challenging condition due to the lack of reliable, accessible and accurate trade and market information.

High fees imposed

High fees imposed this challenge face during the trading as the result of the variations at the border. This means that the traders are being liable to pay high fees when want to import or export their maize but these fees differ from one country to the other. Therefore, this discourages much the traders to participate into cross border trade as the result may cause loss of earning among the traders. This is contrary to particularly on question related to tariffs, exchange rates, custom procedures, product standards and other regulations. This result to most of small-scale traders prevents them from fully benefiting from the trade opportunities. Additionally, the difficulty to commercial activity is the presence of non-tariff barriers, which include slow moving, long queues at the border, which results to the wastage of time.

Delay of permit

Delay of permit this was revealed when the traders want to transport their maize from one point to the other so due to the many procedures imposed in the cross-border trade may lead into traders lose. It was stated that permit took sometimes a month until its processing which can cause the delay in the market by traders.

Empirical results

Multiple linear regression analysis

Cross-border trade has an impact on the outcome of household livelihood, Different independent variable was included such as exchange rate, competition and inflation were as the dependent variable is implementation of the household livelihood at Mutukula. Therefore, results indicated that exchange rate, competition and inflation in the model are good predictors to explain the changes of household livelihood as the results of the changes of independent variables by 71%.

Table 4: Effect of cross border trade on household livelihood outcome

Independent variable	B	Standard Error	t- value	Sig.
Constant	-478.90	219.18	-2.19	0.031
Exchange rate	2.74	4.34	0.63	0.000
Competition	114.01	18.02	6.33	0.000
Inflation	96.61	15.69	6.16	0.000

R²= 0.71; F-value = 91.07, P <0.05

Exchange rate

Findings from the Table 4 indicated that the exchange rate is positively related with the household livelihood outcome with a coefficient of 2.74. According to this, if all other variables remain constant, an increase in the price of one currency on the exchange market will result in a 27.4% increase in household income. In a similar manner, the exchange rate is referred to as the cost of one currency in relation to another. The demand for a particular currency affects exchange rates. When a nation's currency is in strong demand, its value typically increases. Buying things in one country and selling them in another is frequently less expensive due to currency fluctuations. Therefore, exchange rates significantly affect international trade.

Competition

Findings from the Table 4 indicated that the competition is positively related with the household livelihood outcome with a coefficient of 114.01. This implies that when the country relative ability to provide maize increases may lead into an increase of the household livelihood by 114.01 when other factors held constant. According to reports, the contemporary environment's increased market interdependence and rivalry make maintaining an enterprise's market position more challenging (Svarova and Vrchota, 2014). The relative capacity of a nation to offer different goods or services is measured by its level of competitiveness. Efficiency, labor costs, the extent of government regulation, and the ease of conducting business are all factors in determining competitiveness. Competitiveness has an impact on cross-border trade since more competitive nations tend to have higher levels of international trade (Zata, 2016).

Inflation

Findings from the Table 4 indicated that the inflation is positively related with the household livelihood outcome with a coefficient of 96.61. This implies that when there is general rise of price level of maize resulting into an increase of the household livelihood outcome by 96.61 when other factors held constant. This means that when the price of the maize is too high the cross-border traders of maize will sell the maize at that high price which will enable them to increase their income, as the result the livelihood of the household will be very high.

Conclusion and Recommendations and area for further studies

Conclusion and Recommendations

The findings confirmed that cross border of maize trade has significant impact on the improvement of household's livelihood. This is supported by the evidence of the contribution of cross border trade in employment creation, income generation and affordability of education and health care service. Also, the study recommended the facilitation of free movement of persons through use of traders identity cards and the removal of visa requirements, among others in order to promote cross border trade of maize since we have been united through East Africa Community, Mutukula infrastructure well-constructed especially market at the border where the trading is taking place so this will reduce the unnecessary cost especially during rain seasons and removal of some Non Tariffs Barrier which hinder the Cross Border trade of maize in Mutukula.

Areas for further studies

This study focused on the contribution of cross border of maize trade in improving household's livelihood in Mutukula border. This finding reveals that it is true that cross border of maize has improved the household's livelihood since it creates employment and income generation. Further studies I recommended to assess customs procedures that hinder traders during trading across borders.

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The Effect of Financial Resources on the Achievement of the Value of Money in Construction Projects in Dodoma City Council

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Abstract

The study assessed the effect of financial resources on the achievement of the value of money in construction projects in Dodoma City council. A purposive sampling technique was used to select a sample of 100 respondents out of the targeted population of 200 respondents. A mixed study design was used in this study whereby questionnaires and interview guide instruments were used to collect data, the collected data were analysed through regression model and descriptive analysis. The findings show that there is a positive relationship between financial resources in project construction and the value for money. The study concludes by giving out recommendation focussing on the achievement of value for money objective in construction projects.

Keywords: Financial resources, value for money, force account, performance

Introduction

Force account approach is among the employed means of outsourcing. However, unlike outsourcing, the force account methodology is utilized within the corporation where one department may be outsized by another (Akinsiku,2014). The employment of force account approach has been widely employed in both the developed and developing worlds. This approach has been much applied in the developing countries (Bowen,2018). Force account technique is essentially a process through which an organization employs its own employees and equipment to complete its job (Bowen, 2018). The approach is widely used in China, Japan, Australia, and the United States. Since 1992, the aforementioned nations have begun keeping force accounts. China and Japan are the world's largest users of the force account system (Ceric, 2012). Force account has existed in African nations, but it has faced several obstacles, including a lack of sufficient resources in terms of manpower, cash, and equipment to carry out public works. Countries such as South Africa and Egypt have adopted this strategy to undertake public projects, albeit with some difficulties (Ceric, 2012).

In Tanzania, the use of force account has expanded lately in governmental institutions, notably the Local Government Authorities (LGAs). Force account expansion is the result of the amendment of the Public Procurement Act (PPA), 2016, where force account is incorporated in section 64(5) of the PPA, 2011, as read in conjunction with the PPA amendments of 2016, where the Procuring Entity (PE) uses its resources and/or collaborates with other public or private agencies to execute construction works. According to the cited legal framework, the use of the force account can be authorized in the following circumstances: "Where the essential works are dispersed or located in remote places where enterprises with construction permits

are unable to tender at a reasonable price; where the work must be completed without disrupting ongoing operations; where the risks of potential work disruption are better handled by the acquirer or public authority than by the company; there are emergencies that require immediate attention; where the procurement tool has trained personnel to conduct and handle the tasks required or the repair or construction is part of the purchasing tool's regular activity.'

Force account has been applied in building activities in various Tanzanian state institutions. Tanzania Electric Supply Company Limited (TANESCO) is one of the largest public entities in

Tanzania where force account has been extensively used in energy distribution projects (PPRA, 2018). However, one key point to notice about TANESCO is that it has an adequate workforce, including sufficient staff, customized vehicles, and equipment for carrying out such tasks, and frequent activities are carried out to empower those workforces. Another public organization that has used force account is Tanzania Railways Limited (TRL), which uses its personnel to renovate railway infrastructure. (PPRA, 2018).

Force account boosts the government's ability to reap advantages in terms of cost, quality, staff capacity building, internal secrecy, and security assurance. However, it is critical to recognize that to reap the aforementioned advantages, appropriate project evaluation on what to do, why to do it, how to do it, when to do it, and who to do it is required. The replies must include the objective, scope, cost estimates, timing, and role and responsibilities. What internal resources are available if Procuring Entity decides to deploy Force account? External resources - if resources to execute Force account are not available, what other public organization can conduct a portion or the entire project most effectively and efficiently, and risks assessment - what barriers/risks exist in adopting the method over engaging a private contractor?

Despite the obvious benefits of using Force account in construction projects, there remains a persistent problem during project execution. Because of this flaw, the project's efficacy suffers. According to the Public Procurement Regulatory Authority (PPRA, 2017) audit study, there are several flaws in Force account -implemented projects. For example, the building of Patandi Special Needs School did not satisfy the standards for employing FA, and the project lacked technical specifications. The material bills were not properly prepared.

Inadequate project performance may be linked to several causes, including poor project management, lack of financial resources for project execution, and lack of construction equipment for project implementation. Proper implementation of the force account method necessitates the fulfilment of critical aspects that would allow the completion of projects implemented using the force account method; thus, this study concentrates on the evaluation of the effectiveness of the force account as a procurement method in achieving value for money in construction projects.

Several studies have examined whether a force account is a procurement or payment technique without taking into consideration the interests involved in its execution to get the value for money. Some argue that using a force account is a superior means of completing public works contracts than using building contractors. Such efforts are critical in shedding light on the concept of force account as a method of procurement in project implementation to get value for money-(Mayani 2019).

The usage of the force account approach in the implementation of government projects has expanded significantly in Tanzania. The approach is used for a variety of projects. Similarly, there is a rise in academic activities centred on the force account technique. Mayani (2019) explored the role of force account in obtaining value for money in Tanzanian building projects: a case study of Bariadi town council. Mbabazi (2018) also conducted a study on the introduction of a force account method in road maintenance work procurements: Stakeholders' perspectives in Uganda. Furthermore, Tekke (2019) investigated the performance Determinants of the Force Account Method of Contracting: -The Case of Public Infrastructure Rehabilitation and Remodelling in Kenya.

The government now places a greater focus on the use of force account in the building of public projects than in the past. Despite the use of this method, Malinga (2018) highlights its failure to provide value for money, citing low quality, delayed completion, and high costs of construction projects as a result of poor contractor engagement, high costs of completed projects, lack of adequate supervision, and opportunistic behaviour as major issues in constructing projects using FAM. Despite Malinga and CAG 2017's observations, none of the cited literature has attempted to establish the effectiveness of the procurement process in guaranteeing value for money. It is on these grounds that, this study tries to work on the noted gap by a proposed study by assessing the effectiveness of force account as a procurement method in achieving value for money in construction projects.

Literature Review

Capital is one of the resources required for the use of force accounting. Evans (2016) defines capital as tangible and intangible resources that enable constructability and productivity, such as machinery, finances, patents, brands, human capital, building procedures and practices, knowledge, and experience.

According to URT (2013), "force account" refers to the building by the procurement entity itself, in which the purchasing entity employs its own equipment, hired labour, or funds. Funding is required to acquire building supplies, fuel for equipment, and pay labourer wages, pay allowances, and supervision charges. In addition, tools and machinery are required in building construction to facilitate building construction. These include pickups, excavators, compactors, concrete mixers, trucks, and motor graders, among other things. All of these are referred to as the organization's capital. Value for money in public entity constructions is achieved by pursuing the lowest whole-of-life cost, clearly identifying significant advantages, and delivering on schedule, according to Personal, Archive, Nsiah-are, and Prempeh (2016). This is made feasible by capital availability (funds and equipment). As a result, value for money regarding an organization's capital is not about getting the lowest starting price: rather, it is about achieving the best combination of total life costs and quality.

The Oxford English Dictionary defines human capital as "the talents that the work force possesses and is regarded as a resource or asset." It incorporates the notion that investments in people (for example, education, training, and health) promote individual efficiency. Human capital, according to Gupta et al., (2002), is the store of skills that the work force possesses. Human capital is essential to accomplish VFM in force account because labour knowledge and skills are required to ensure that work is completed according to the appropriate standards.

According to Ansell et al. (2009), value for money in building construction is defined by the cost of construction, the quality of construction materials, and the time it takes to complete the project. It is evident that without capital, it is difficult to purchase high-quality construction supplies and finish the task on schedule and within budget. The funds allow for the prompt procurement of building supplies, payments for labour and administrative expenditures associated with the project, such as supervision, report printing, project papers, and building design, without which value for money would not be obtained. Furthermore, being one of the capital in building construction, the equipment has a significant influence on the value for money in building construction. Equipment is required to assist project management, transport construction supplies such as concretes and gravels to the site, clear and level the site, compact the ground, and test the strength of building blocks. All of them have an influence on the value for money of buildings since the lack of these instruments results in project delays, poor quality, and cost increases, compromising the VFM of the construction project. Therefore, the capital of an organization plays a big role in achieving value for money in buildings construction.

Theoretical Review

The Transaction Cost Economics Theory guided this study. The construction method in which the procurement body employs its resources to perform building projects is known as the force account. On the other side, the value for money entails finishing a building project on schedule, at a low/reasonable cost, and in accordance with user demands (quality). Transaction expenses exist at every level of any project. Transaction expenses in force account relate to the costs of procuring building supplies, skilled local labourers, meeting and transportation of materials, gasoline, automobile maintenance, and supervision costs. These expenses raise the project's total cost of ownership.

The theory was applied this study since it focused on employing force accounts to acquire a project using in-house resources. There are transaction expenses in pursuing a force account that should be carried by the PE, such as the cost of managing and monitoring staff, obtaining supplies, negotiating and employing local skilled labourers, and supervisory costs.

Methodology

Data for the study were gathered from Dodoma City Council. Local government authorities were chosen as acceptable procurement organizations to investigate because-, in Tanzania, local government authorities are responsible for a lot of projects to be implemented under force account, (URT, 2018). As a result, the information (data) needed to support this investigation was readily available.

The research used a non-probability sampling approach based on probability sampling techniques since obtaining a sample frame for the whole population was extremely challenging, making any probability sampling techniques that required a sampling frame impossible to apply. Purposive sampling was used to choose key informants within the Dodoma City Council that are knowledgeable about procurement and the force account procurement process. The researcher chose respondents who were heads of departments and had specialized expertise on the subject at hand, which means that they chose respondents based on intuition and who were willing to supply the necessary data. The sample size for this study was 50 per cent. According to human resource department documents from the Dodoma City Council, the city council has 200 employees working in city offices This indicates that each group has been multiplied by 0.5 to get a sample size of 100.

Primary and secondary data were collected for the study. A series of semi-structured questionnaires were issued to important respondents, primarily organization personnel, in order to obtain their perspectives on the subject matter to be studied. Likert scale surveys were employed, with respondents free to pick their preferred answer to a specific topic. The interview method was used in the collection of data from DMC using an interview guide instrument. The interview data-collecting method entails the introduction of oral-verbal stimuli and the response in terms of oral-oral responses. Interviews can be formal or unstructured (Kothari, 2004). Secondary sources in this study included documentary reviews from the internet, as well as published publications, journals, and research reports. This sort of secondary source provided study-related information.

Data were analyzed using descriptive statistics, and qualitative and quantitative analysis. The qualitative data was obtained through the administration of interviews, in which the gathered material was carefully structured, examined, and recoded to construct and explain the topic. This study used descriptive statistics to analyze data collected from questionnaires and present them in numerical forms such as measures of central tendency, frequencies, and percentages with the help of SPSS. With the use of the Statistical Package(SPSS) for the Social Sciences, quantitative data from surveys were also analyzed using both descriptive and inferential statistics (SPSS).

Findings

This Financial resources was the first research objective, whereas in order to test the Effect of financial resources on the achievement of value for money in construction projects in the LGAs, the analysis provided questionnaires on five Likert points where respondents were asked to select the level of agreement from strongly disagree to strongly agree that they strongly disagreed as 1, Disagree as 2, Neutral as 3, Agree as 4, and Strongly disagree as 5; the liker scale was adopted to show the effect by providing a mean score for the responses. As asserted by (Kilangi, 2014). The mean score of 0 to 2.5 shows that the respondents were not in agreement with the statements, while the mean score of 2.6 to 3.4 shows that the respondents were moderately in agreement with the statements provided. The mean score of 3.5 to 5.0 shows that the respondents were very much in agreement with the statements in question.

When analyzing the effect of financial resources on the achievement of the value for money in LGA construction projects, - in essence, the FAM implementation lets the purchasing business utilize its own equipment to do the operation. According to the study's findings, respondents disagreed with the notion that the organization has sufficient financial resources to undertake

construction projects with its own resources, and the findings suggest that feasibility studies have not been conducted to determine whether the available resources and structures could support the FAM's implementation in LGAs. The study findings were consistent with the qualitative findings from the interview session, in which the respondent stated that:

Our council's fund availability is insufficient to undertake construction on force account; therefore, I request that the council and other government organizations reconsider using this method; instead, using other procurement methods will allow the organization to benefit from external contractor's capital (Interview transcript 2021)

These findings were consistent with Mayan's (2019) depiction that some of the structures that were erected by force account were not completed due to a shortage of cash in Bariadi town council, where the maternity ward was not completed due to a lack of funds. The agreement on force accounts and external contractors has been discussed for a long time; execution of the FAM was thought to impede private sector expansion.

According to Zhang (2005), the use of the force account procurement technique discourages the expansion of private sectors; hence, the public sector should form a public-private partnership to promote the growth of private sectors in the economy. The researcher developed the point because public sectors, particularly in developing nations, do not always have the resources necessary to complete construction projects on schedule and with the requisite quality.

According to Kwak et al., (2009), the public sector's potential to develop information and hence make decisions that drive value for money activities is constrained due to limited resources and competency of public officials. As a result, the private sector fills the void admirably since the government adopts and encourages the usage of the force account system in order to boost and stimulate human resource productivity while lowering expenses in order to achieve the value for money. However, despite its efficacy, the deployment of the force account procurement technique can be viewed as a strategy that kills local businesses, because contracts that were supposed to be done by the private sector can now be done by the governments themselves.

In this regard, as Shengaz (2017) noted, the government can reduce costs, but the possibility is remote since it misses taxes paid by the local private sector. It was so highlighted that FAM was

likely to restrict the benefits of the local building sector because all works would unavoidably be carried out using the force account technique.

Similarly, a multiple regression analysis was performed on the obtained data to see whether there is a significant association between financial resources and the value for money in Dodoma City Council building projects. In Dodoma City Council, performance indicated that there is no substantial link between financial capital and demand for development projects. According to (Parker & Hartley, 2003), the adoption of the FAM was based on the premise that in-house transaction costs were substantially lower if external contractors were engaged to allow the project to be completed at the lowest feasible cost, allowing value for money to be delivered. This conclusion is consistent with the findings of Shangazi (2017) and Mayan (2019)-, who argued that financial resources do not have a major impact on the realization of value for money under the force account procurement approach. Based on these findings, organizations that implemented force account did not have enough resources to implement such mechanisms. Having funds means that the project's required materials, equipment, and labour can be financed on time, resulting in the project being completed on time and at the appropriate quality.

Table 1: Descriptive Statistics on the Effect of financial resources on achievement of value for money

N	Minimu m	Maxi mum	Mean	Std. Deviat ion
Our council has enough funds to undertake construction projects through a 100 force account	1	5	3.35	1.114
Our Council have enough equipment to undertake construction projects in force 100 account	1	5	2.35	1.298
The presence of owned facilities and equipment of our council determines the 100 quality of the construction	1	5	2.98	1.321

The use of scrap (aged) equipment in construction leads to delay completion of 100 the building	1	5	3.44	1.343
Valid N (listwise)	100			

Source: Field Data, 2021.

Table 1 indicates that respondents accepted that DCC had ample resources to pursue construction projects, as shown by an average score of 3.35. Regarding the council's ability to pay for building projects on the force account, The Council having adequate equipment to perform building projects in force earned a mean score of 2.35, indicating that respondents disagreed with the information provided. The presence of owned facilities and equipment had a mean score of 2.98, indicating that respondents disagreed with the provided information. Furthermore, the use of junk (old) equipment in construction causes a delay in the completion of the structure, as demonstrated by a mean score of 3.44. The findings indicate that the respondents were found to be moderately in agreement with the presented facts. This suggests that the council does not have the resources to use force accounts as a procurement strategy.

Regression Analysis

The researcher sought to understand the extent of influence of independent variable (financial resources) on the dependent variable (value for money). The "R Square" is a measure of how much the variance in the dependent variable is explained by the model. Table 2 summarizes the results.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.657 ^a	.432	.408	2.52468

a. Predictors: (Constant), Financial resources

Source: Field Data, 2021

Table 2 indicates that the value "R Square" is 0.432, which implies the degree of influence of independent variables (financial resources) on the dependent variable (value for money) is 43.2% that 43.2% of the variations in value for money could be explained by the changes

organization personnel, capital/fund and project completion time. According to the findings, other variables not explained in this study contributed 56.8% to the value for money. The study also reveals a substantial relationship between force account efficacy and value for money ($R=0.657$). According to Pallant (2005), R values ranging from 0.1 to 0.3 indicate a weak relationship, R values ranging from 0.31 to 0.6 indicate a moderate link, and R values ranging from 0.61 to one indicate a very strong relationship.

Analysis of Variance (ANOVA) Test

The ANOVA test was performed on the regression output, and the results are displayed in table. The analysis yields the sum of squares, degree of freedom (df), mean square, regression, and residual values from the regression analysis. The P-value, which exemplifies whether the model is significant or insignificant, was 0.000 in the ANOVA table. To be significant, the P-value must be ($p < 0.05$), hence the P-value was 0.000.

Table 3: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	455.751	4	113.938	17.875	.000 ^b
	Residual	599.158	94	6.374		
	Total	1054.909	98			

a. Dependent Variable: Value for money

b. Predictors: (Constant), Financial resources

Source: Field Data, 2021

According to Table 3, the independent factors (Financial resources) are all significant predictors of the dependent variable (value for money). This is supported by a P-value (sig 0.000) less than 0.05.

Regression Coefficients

Table 4: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	2.435	1.038			2.346	.021
financial resources	.033	.064	-.053		-.510	.011

a. Dependent Variable: Value for money

The regression coefficient table, contains the values of the regression equation for predicting the dependent variable from the independent variables. The estimated coefficients (standardized coefficients) depicted by beta value in table 4 of the regression coefficient below indicate how much the "Scores" vary due to variation of any independent variable (personnel competence, financial resources, and project completion time) while holding other independent variables (predictors) constant.

The factors employed in the model that contributed to the estimate of the dependent variable are listed in table 4 above. It is seen in the Beta column under Standardized Coefficients that,

financial resources had a negative beta value of 0.033, however, their contribution to forecasting the dependent variable was extremely modest.

In addition, the P-value (labelled Sig. in the column) indicates that this variable is statistically significant when estimating the dependent variable. If the P (Sig.) value is smaller than 0.05, the predictor is likely to be significant when estimating the dependent variable. If the value is more than 0.05, it is assumed that the variable does not substantially predict the dependent variable. In table 4 financial resources contribute significantly to value for money because of their sig. values are less than 0.05 (5%).

The results, however, demonstrate that if all independent factors (human competency, financial capital, project efficiency, and project completion time) were held equal at zero (0), the value for money would have been 2.435. Keeping all other independent variables fixed at zero (0), financial resources leads to a 0.033 increase in the quantity of money achieved, according to the table. The findings imply that financial resources have a positive relationship (effect) on value-for-money attainment.

Grounded on these results the regression equation to predict a value for money attainment in relation to the effectiveness of force account practices is as follows; value for money = 2.435 + 0.033Financial resources + 1.038 Std. Error

Conclusions and Recommendations

Basing on the findings of this study, governments can save money by purchasing within their organizations using their own equipment and personnel rather than external suppliers, and consumers. -, If not sensitized, the government will continue to view procurement as a mechanism through which the government uses its own resources to deliver services to the public. However, the analysis demonstrated an insignificant contribution to VFM by the capital of the organization and Personnel of the organization. -, This means that organizational capital on VFM in building construction through force account and human competency has little but considerable influence. Force account was seen to minimize construction costs, assure building quality, boost capacity building and skill upgrading, stimulate community engagement, save public money, establish a feeling of community ownership, and expedite construction.

According to the research, councils should register and maintain a database of local contractors so that they may be recognized as local labourer with construction competence and expertise, and if feasible, local labourer should be individuals who have attended construction courses. This study also offers some insights to organizations, particularly municipal governments, on the use of force. Local governments often have limited resources, as indicated by the findings of this study, and require managers to properly utilize existing resources to realize the most possible benefits of employing the force account procurement approach.

This work is not an end in itself; it paves the way for future research on force accounting. Future studies should conduct a more in-depth examination of the efficiency of the fixed budget technique vs the force account method in attaining the value for money.

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The Effect of Negotiation Plan in Achieving Procurement Goals in Public Sector

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Abstract

Many public organizations deny the role of negotiation plan in achieving procurement goals which lead to high procurement and cost, low quality and increased administration costs this study focused on the importance of negotiation plan in acquisition processes. The findings revealed that a good plan has an important role in effective negotiation engagements which enhances the achievement of procurement goals. The study observed the need of organizations to ensure there are proper negotiation plan.

Introduction

In governments, negotiation is frequently perceived to be vicious means of avoiding competition in bidding and of awarding large contracts stealthy to the favored suppliers. Negotiation is that field of knowledge that focuses on gaining the favours of individuals from whom we want things. This is where each side involved in negotiation tries to gain advantage for themselves at the end of the process and thus negotiation aims at compromise. In fact, price is one of the main items of focus during negotiation. In negotiation, to determine purchase price

buyers and supplier usually discuss such element, as cost of production overheads market conditions and others (Nyile et al, 2015). During negotiation, buyer and supplier eventually arrive at a mutual price that both delivers the best value of product or service at affordable price to the buyer as well as the price that favors a supplier interest to ensure a constant supplier-buyer rapport (Swai, 2015).

³⁴Negotiation is performed by effective management of price of materials. It is vital for any organization that interacts with other parties such as suppliers, contractors, customers, statutory and regulatory bodies for their business processes. With globalization of businesses, the scope of negotiations and effective material pricing has broadened from covering the aspects of just purchasing to managing buyer - supplier relationships, legal clauses and risks from external environment. Material pricing management requires knowledge of technical as well as legal aspects of different types of contracting mechanisms.

For Public enterprises, pricing of materials is a strategic role which entails negotiations skills (Frohlich and Westbrook 2013). Negotiation in pricing of materials is a much-nuanced mechanism that finally leads to the best alternative to a negotiated agreement. This eventually determines the profit potential, risk exposure, roles and responsibilities of the contracting parties.

Issues of negotiation in procurement arise from the nature of material being purchased. Among the generally discussed issues include: Quality specifications, price of the material, delivery period, and quantity of supply, discounts, terms and conditions of purchase. Negotiation is of high importance in purchasing and contract management. Therefore, Organizations need to think about how they can improve negotiation skills of their people in relationship to purchasing and contract management. This paper wanted to assess the effect of negotiation plan in achieving procurement goals in Public Sectors.

Literature Review

Negotiation has major influence on achievement of procurement goals in the public organizations through negotiation plan which contributes positively in the achievement of procurement goals.

To understand the negotiation process that ends in distribution and integration agreements, one must understand how information is used during the negotiation. Monczka et al. (2004) pointed out that negotiation is a fundamental value to implement the purchasing strategies developed by a company. Negotiations serve to bridge the gap between buyer and supplier. It is important to have a well-developed trading strategy based on tactics. Basis to support this strategy, in cooperative negotiations, buyer-supplier negotiations create a win-win situation to determine ways to split and split the spread value cake. However, a successful and experienced negotiator knows all of these negotiation approaches and may prefer to use the most appropriate approach appropriate to the nature of the negotiation.

Negotiation within the world can be a complex process (Thompson 2000). Negotiations can take place in different ways: in private life, in business and government, and in international diplomacy (Kim and Segev, 2005). Additionally, negotiations can be a critical aspect of purchasing and supply chain management. The more dynamic the business environment becomes, the more frequent negotiations between partners are required (Cerquides and Sanchez 2008; Voeth, Mayer, 2018; Fisher, Ury, Patton, 2012; Geiger, 2017; Lewicki, Saunders, Barry, 2014). In addition, Sheer and Chan (2003) learned that negotiators need to be knowledgeable in specific areas of business management, product quality, technical specifications, equipment procurement and implementation, and network distribution and deployment, as well as to ensure that negotiation with business partners are conducted effectively. Negotiation becomes a key approach to non-consensual decisions when partners cannot achieve their business goals (Thompson 2000). Brett (2000) argued that when discussing the concept of negotiation, it is important to realize that negotiations involve certain forms of criteria

Competitive Negotiations

Competitive negotiations could be a method to negotiate the price and terms of a particular transaction. This trading method is based on the concept that trading is a zero-sum game; this means that one of the parties must win the negotiation while the other party loses. This idea contrasts with cooperative negotiation methods, which conclude that there are often multiple winners during a negotiation, resulting in a win-win scenario for all parties involved. Someone

or a company that employs competitive negotiation tactics has the notion that there is a single, fixed outcome that both parties are after. The results of competitive negotiation often leave one party feeling like they got the best of the negotiation, while the other party feels like they lost the negotiation.

The losing party usually succumbs to the anxiety more than the winning party. The concept of competitive negotiations was first implemented as a tendering process for companies and government agencies. Individuals within these organizations would send a Project Invitation Letter (RFP) to qualified vendors. The RFP would set out all the parameters and conditions based on which the project would be awarded. Vendors submitting projects within a predetermined competitive range of were then selected based on the project offering the simplest price or service (Leenders, 2006; Kabendela, 2015; & Crump, 2013).

By contrast, in the type of competitive negotiation known as double dealing, each party uses high-pressure tactics and deception to achieve their goals. Competitive negotiation tactics can help companies achieve their business goals (Robert, 2008).

Collaborative Negotiations

Collaboration is about examining individual and common interests to meet everyone's needs. This style of negotiation usually results in me winning: you win. It is based on the satisfaction of all needs and the creation of mutual values. The collaborative style is the basic style required to achieve goals in business negotiations. There are a few prerequisites that must be met in order to be a good collaborative negotiator. These are: an essay to build trust and to fulfill wishes of both parties, try to find creative solutions that let both parties win, on the idea part of the other eighth etc. it is incredibly often the easiest option but should not be used with a competing negotiator. Another disadvantage of the design is the stipulation that negotiators must take into account that is sharing information at the level. Otherwise, one side is often exploited and the other side is advantageous (Rogerfisher, 2007; Melzer P, SchoopM (2016) & Geiger, (2017). Win-win negotiations keep a certain cooperation to achieve results that both parties can enjoy. This type of negotiation requires a high level of trust and ultimately a certain relationship. It has to be found in the result when everyone gets something. In inclusive negotiation in particular, there are proven strategies and principles on how the negotiation process can be successful. "Successfully concluding negotiated agreements where everyone wins requires building trust and sharing information about priorities and preferences;

disaggregation problems; make bundle offers (no single item offers); make several offers at the same time; to structure contingent contracts that make the greatest difference in the beliefs, expectations and attitudes of negotiators; and the use of settlement strategy before and after settlement (Thompson 2001). According to professional negotiators this type of negotiation is the best thanks to creating a long-term relationship of mutual benefit (Rogerfisher, 2007).

Compromising Negotiations

Compromising may be a partial-win, partial-lose proposition, where by you get something what you would like but not everything, and likewise for the opposite party. Compromise is predicated on fairness, mutually sufficient solutions and rationality. The compromising negotiation style is typically confused with the definition of negotiation but of course, compromising is simply bargaining. This style is applied mostly within the situations when business negotiators are managing someone who they know and trust. The foremost important fact within the compromising is to appreciate that the negotiator wins something but also loses something. It's difficult to bear in mind that he lost what he intended. Per the negotiation instructors, the compromising style requires the simplest quality of negotiation training (Lum, 2010).

Conceptual Framework

In this study, the independent variable is negotiation plan and the dependent variable is achieving procurement goals through effective negotiation attained from effective negotiation plan.

Negotiation planning

The study revealed that, negotiation has major influence on achievement of procurement goals because majority of respondents strongly agreed and agreed that negotiation plan contributes positively to achievement of procurement goals with an average mean value of 3.8 and average standard deviation of 1.25 which means that achievement of procurement goals resulted from effective negotiation is influenced by effective negotiation plan. The findings also concluded that achievement of procurement goals as a result of effective negotiation depends on proper negotiation plan in Public sector which proves that there is positive and significant effect between negotiation plan and \achievement of procurement with a significant value of 0.000($P < 0.000$).

For organization to perform negotiation on an effective content, they must have a plan which guides them on how to perform negotiation and how they can handle different challenges that may face negotiation team in one way or another (Sangau, 2015). Also, organizations have to make plan on the bases of nature of items needed to be purchased as well as the value of items purchased so as to know the efforts needed to keep into such negotiation (Swai, 2015).

Research hypothesis

The following hypothesis was formulated:

H₁: *There is a positive relationship between negotiation plan and effective negotiation in achieving value for money objective.*

The theory of negotiation holds that negotiation could be a special and formalized version of agreement whereas largely used on vital problems so on make common agreement on. Negotiation is very important when one facet of the parties desires the opposite part to create agreement on achieving its aims. The most reason for negotiation is to form a typical environment which is in a position to result into future trust between the edges. Thus, it ensures the people who are involved to be a lot of targeted on the terms and conditions to be in agreement on. It's the foremost effective approach for conflict resolution and contract management; therefore, it needs effective skills and skill. The speculation further holds that negotiation is that the process that involves the two sides with totally different positions to possess one common position below call rule of unanimity. Negotiation, undergo stages that accommodates agenda setting, a groundwork for guiding principles, defining the problems, dialogue for favorable concession exchanges, and a quest for implementing details. Transitions between stages are remarked as turning points. There are variety of approaches which are control as basis of negotiations which are Structural analysis, Strategic analysis, method analysis, and Integrative analysis. Every of the approaches of negotiations is presented within the subsections below. Structural analysis has elements supported the distribution of power among the 2 parties concerned in negotiation. Structural analysis approaches diverge from ancient realist notions of power, thus solely regards power because the only possession and basis of relations. The approach holds that below structural analysis there could additionally be power balance between the parties hence dominating one another or there could also be power difference therefore one facet to be stronger than the opposite therefore the weaker party being

dominated. Structural analysis is straightforward to criticize, as a result of it predicts that the strongest forever win. This, however, doesn't always hold true. The second approach within the negotiation theory is strategic analysis whereas it holds that every of the negotiating parties have a veto hence every of the parties has the ability to join forces (C) or defect (D). Furthermore; strategic approach analyzes the seemingly results of negotiations therefore (C, C, C, C, D, D, D, D, and C). Most cooperation among the 2 sides provides out best results. The sole challenge is that the other party isn't certain that the corresponding party cooperate effectively, thanks to two huge reasons: First of all, the selections achieved in the first or second chance can be returned the award of the corresponding side. Therefore, both parties have an uncertain motivation for the company or the exit. When one of the parties cooperates while the other party fails. The renegade side has a high chance of winning more. The third approach to negotiation theory is process analysis.

The approach has the climate both structural and strategic approaches, but the process analysis is based on the dynamics of the method of the negotiations and tries to predict the behavior of the counterparty about making assumptions about trading results. The method of trading is considered disclosed between two points; that they are where conflict or discord begins, and hence the end point of the Third Approach of negotiation theory is process analysis. The approach has the climate both structural and strategic approaches, however, the process analysis is based on the dynamics of the method of negotiations and attempts to predict the behavior of the opposing party as well on assumptions about trading outcomes. The trading method is disclosed between two points in time as considered; which are the starting point of the conflict or discord and also the end point of the meeting or convergence. There is also a safe point that is the result of choosing to retreat. An important feature within the negotiation process is the concept of turning points (TP). The approach has three frames that are affected by events. The analysis methodology has taken into account the frameworks' common departure from the approach, recognizing that the departures may be gradual or abrupt, thereby moving away from the agreement. Turning points are always viewed as part of a negotiation crisis or conflict. TP is likely to occur when a crisis occurs during trading. When crises arise, the parties can commit to withdrawing from the negotiation or beginning a new type of negotiation. This approach divides the trading method into successive stages, but not at fixed points. Approaches as an extension of denial because the pre-negotiation phase is like the first meeting of the parties. The end result is

explained by the action of the actors in the different phases. Phases can include pre-trading, finding a distribution formula, peak behavior and settlement.

Methodology

The researcher adopted this design due to the nature of the study and the role of design in a research study. According to Omai (2015) the use of descriptive design deal with research that aim at providing description of the issue under investigation without making comparison, design also enables researcher to make generalization of study results from sample of large study population. Since study carried out to a single area for the purpose of making the generalization descriptive design found to be the ideal design to be in use. The unit analysis in this study were employees of the PSSF office located in Dodoma region particularly the procurement department, stores department, distribution department, demand and planning department, clearing and forwarding, quality assurance department and finance department who are in one way or another related direct or indirect with the achieving value for money within PSSSF and Tanzania in general. The targeted population of this study was 288 employees of PSSSF in Dodoma, from the Information and Communications (ICT) Department, Finance Department, Legal Department, Internal Procurement, Stores Sections and Quality Assurance Department Section, who typically play a role in ensuring effective negotiations for a profitable acquisition of Dodoma-based PSSSF. However, the researcher was interested in selecting a sample that represented the actual population, so researcher choses non-probability sampling because of the emphasis on deep information rather than inferences or generalizations.

Analysis process in this study carried out in two major parts; first was analysis of preliminary information and second part was analysis of the specific objectives of the study. Study preliminary information was analyzed through the use of simple statistical computation such as frequency and percentages where presentation of the research findings was in a tabular form. Descriptive analysis process was conducted with the aid of Statistical Package for Social Science (SPSS). Descriptive analysis facilitates easy understanding of the study results (Kaushik and Mathur, 2014). After descriptive analysis correlation and multiple regressions analysis was conducted to test the direction and relationship of the study variables.

Analysis, Findings and Discussions

Negotiation plan In Achieving Procurement goals

Descriptive analysis was done to assess effects of effective negotiation on achieving procurement goals. This objective was assessed using five sub variables namely compliance to the proper negotiation, negotiation procedures to be followed, timely preparation of negotiation plan, qualities of negotiation plan and negotiation guidelines. Descriptive statistics were based on mean and standard deviations. Table 1 indicates descriptive results of the same.

Table 1: Descriptive statistics for negotiation plan

	N	Mean	Std. Deviation
Our organization has proper negotiation plan that increases achievement of procurement goals.	167	3.53	1.09
Effective negotiation increases achievement of procurement goals	167	3.03	1.16
Our organization has a practice of on time planning of negotiation achievement of procurement goals	167	2.46	1.30
Negotiation plan has all qualities of good plan achievement of procurement goals	167	3.26	1.32
Our organization provides guidelines on negotiation for all parties hence achievement of procurement goals, Transparency in auditing process enhances performance of procurement audit	167	3.69	1.38
Valid N (list wise)	167		
Average		3.8	1.25

Source: Field Data (2022)

With reference to the above results based on mean and standard deviations, the findings show that the standard deviation is low which indicates that standard deviation is centered on the mean. This empirical finding indicates that there is positive link between negotiation plan and achievement on procurement goals within the organization.

Table 1 indicated that compliance to proper negotiation plan has a mean of 3.53 and standard deviation of 1.09 which means that majority of respondents agreed that proper negotiation plan increases the efficiencies among them and finally lead to high achievement of procurement goals in terms of economy, efficiency and effectiveness. The findings also indicate negotiation procedures to be followed has a mean of 3.13 and standard deviation of 1.16 which shows that most of the respondents agreed that negotiation procedures to be followed has significant effect on the achieving procurement goals of Public procurement organization.

The findings also indicated that majority of respondents disagreed that timely preparation has no effect on achieving procurement goals in Tanzania as the mean was 2.46 with standard deviation of 1.30 although there was no high diversion rate in the standard deviation. Also, the findings showed that quality of negotiation has positive effect on achieving procurement goals in Public procurement as the mean was 2.26 and standard deviation of 1.32 which range on the acceptable range.

Furthermore, researcher wanted to understand the effect of negotiation guidelines in during negotiation process increases the effectiveness of negotiation hence achieving procurement goals as the results showed that most of the respondents agreed with average mean of 3.69 and standard deviation of 1.38. This implies that majority of respond responded positively that negotiation guidelines in procurement negotiation increases effectiveness of negotiation hence increase achievements of procurement goals within the organization.

Generally, the findings found that majority of respondents agreed that negotiation plan during procurement negotiation process has a significant impact on the achievement of procurement goals in Public sector in Tanzania which was evidenced by an average mean of 3.8 and standard deviation of 1.25 and therefore, its importance for the organization to proper negotiation guidelines in order to increases effectiveness of negotiation in terms of timelines, quality of audit report and conformance to audit procedures.

These results are in line with Atkin & Rinehart, (2006), and the narrations made by Kabendela, (2015), Crump, (2013). Aslani, Ramírez-Marín, Brett, Yao, Semnani, Z., Zhang, Tinsley, Wingart, and Adair, (2016), that negotitaion should not exist in a vacuum and it should and need to treated as a direct link as a srategic plan to the achievment of the procurement goals with the organizational setting, safe in the knowledge that cost effectiveness and quality of project need to be attributed from effective negotiation blue print.

Achieving Procurement goals

Descriptive analysis was conducted to assess achievement of procurement goals in Public sector through effective negotiation. The dependent variable is performance of procurement audit and it was measured through timelines, quality of negotiation report and cost reduction through effective negotiation. Descriptive statistics was based on mean and standard deviations. See table 2 that indicate descriptive results of this variable.

Table 2: Descriptive statistics Achieving Procurement goals

	N	Mean	Std. Deviation
Effective negotiation within the organization reduces procurement costs	167	3.77	1.43
Effective negotiation within the organization enhance quality	167	3.71	1.16
Timely delivery of supplies within the organization is achieved through effective negotiation	167	3.87	1.08
Valid N (list wise)	167		
Average		3.78	1.22

Source: Field Data (2022)

Descriptive statistics indicated in table 2 concerned with timely negotiation, quality of supplies and cost reduction through quotation as the measure of achievement of procurement goals in Tanzania Public sector. The findings observed that majority of respondent's elements agreed that there are there is timely negotiation resulted from good cooperation among the negotiation team, there is there is quality of supplies resulted from good relationship the parties and cost reduction through effective negotiation increases achievement of procurement goals within the organization.

This result is evidenced by the mean of 3.77, 3.71 and 3.87 with a std. deviation of 1.43, 1.16 and 1.08 of the sub variables depicted in the table 4.11 above respectively. Generally, most of the respondents indicated that there is achievement of procurement goals resulted from good negotiation plan and competent negotiation team and affected by some challenges such as poor negotiation plan, incompetent personnel, lack negotiation expertise and inadequate experience to the negotiation personnel due to the presence of timelines, quality and compliance in which is justified by an average mean of 3.78 and the standard deviation of 1.22 respectively. The results are also supported by Sangau, (2015), Swai, (2015), Bouwman, (2017), Bouwman, Van Deemen, Thiel, S. van, & Rouwette, (2016), Kabendela, and (2015), Crump, (2013), that timely and cost-effective negotiation are likely to drive the organization to achieving the set of organization goals.

Summary of descriptive statistics

This part provides the overall descriptive results based on mean and standard deviation on all independent variables such as negotiation plan (V200), competent of negotiation personnel (V300), auditor's challenges facing effective negotiation (V400) to the dependent variable which is achieving procurement goals (V500).

The average mean for each independent variable was as negotiation plan (3.80), competent of procurement team (V300), and challenges facing effective negotiation (V400) to the dependent variable which is the achievement of procurement goals(V500). The average standard deviation for each independent is Negotiation plan (1.24), competent of procurement personnel (1.22) and Challenges facing effective negotiation (0.862).

Correlation Analysis

The study sought to establish the relation between these two variables so as reveal statistically the significance, degree and direction of the effect of procurement planning, professionalism, procurement contract management and procurement records management on procurement performance. The correlation coefficient value of +1 (Positive 1) mean that the variables are perfect positive correlated while correlation coefficient of -1 (Negative 1) mean that the variables are perfect negative correlated.

Hence, correlation between negotiation plan and achievement of procurement goals was $r = .876$ which reveal that negotiation plan has strong positive effect on effective negotiation on achievement of procurement goals and the improvement of negotiation plan within the organization positively influence the achievement of procurement goals as the study was statistically significant at $P\text{-value} = 0.000$ which is less than confidence level of 0.05.

Regression Analysis

The sub variables retained during factor analysis were computed and subjected to regression analysis of the study. Regression analysis was conducted in order to assess the association between independent variables such as legal framework (V200), records management system (V300), auditor's competence (V400) as well as auditor's independence (V500) and dependent variables which is performance of procurement audit (V600). The multiple regression analysis enables researcher to test hypothesis for the purpose of rejecting or accepting the null hypothesis. The output of the multiple regression analysis includes model summary, analysis of the variance (ANOVA) and coefficient of regressions.

Model summary

Model summary in regression analysis provides information on how much the independent variable influences dependent variables that mean how negotiation plan effect the achievement of procurement goals in Tanzania Public sector. The overall contribution of independent variable to the dependent variable is determining through R square value.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.902 ^a	.814	.809	.19487

a. Predictors: (Constant), Negotiation plan, competent of negotiation team and, challenges facing effective negotiation

Source: Field Data (2022)

The findings of R square (coefficient of determination) in table 3 above indicated that the R square value =.814. This implies that any change of variable (independent) leads to significant change to the variable (dependent) by 81.4%. It means that 81.4% of the achievement of procurement goals is influenced by negotiation plan, while 18.6% of the achievement of procurement goals is determined by other factors not covered in this study.

Analysis of Variance

Analysis of variance was performed in to determine the statistical significance of the findings obtained in the field and make decision with regard to null hypothesis.

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.909	4	6.727	177.158	.000 ^b
	Residual	6.152	162	.038		
	Total	33.061	166			

a. Dependent Variable: Achieving procurement goals

b. Predictors: (Constant), Negotiation plan, competent of negotiation team, challenges facing effective negotiation on achieving procurement goals

Source: Field Data (2022)

Results from the above table (table 4) indicated that values less than 0.000 which proves the regression model is significant since legal framework, records management system and

auditor's competence and auditor's independence contributed positively to the dependent performance of procurement audit with p-value of 0.000 which is less than 0.05. Hence the independent variable is significance to the dependent variable. This is definitely supported by Frost (2014) who argued that, outcomes of regression model are said to be significant when P-value is less than 0.05.

Regression Analysis

Coefficient of regression results intended to check the contribution of each variable (independent) to the dependent variable. Using unstandardized coefficients of regression indicates the contribution of each independent variable to the dependent variable. The coefficient of regressions also determines the significance of the study variables where the study is said to be significance if its value is less than 0.05. Consider table 4 below.

Table 5: Coefficients of regression

		Unstandardized		Standardized		
		Coefficients		Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.077	.268		.288	.774
	Negotiation plan	.787	.066	.790	11.995	.000

a. Dependent Variable: Achieving procurement goals

Source: Field (2022)

From the regression equation developed, with the assumption that factors such as negotiation plan on achieving procurement goals remain constant (at zero), the achievement of procurement goals at PSSSF would be 0.077. The regression equation further illustrates that if all other variables are kept unchanged, a unit increase in negotiation plan lead to 0.777 increase in achieving procurement goals which is statistically significant at P value = 0.000 ($P < 0.05$).

Hypothesis Testing

After the analysis conducted, researcher aimed into testing the hypothesis. Pallant (2010) demonstrated x that the hypothesis is accepted only if the significance level is less than significant value of 0.05. The Unstandardized Beta coefficient was employed to determine the direction of the relationship between the independent and the dependent variables.

H₁: There is positive relationship between negotiation plan and on effective negotiation on achieving value for money in Tanzania

The findings from the multiple regression analysis, negotiations plan had a significant value of 0.000 ($P < 0.05$) with the unstandardized coefficient of value of .777 which indicated that professionalism has positive significant effect to achieving procurement goals. Therefore, the hypothesis was accepted.

Conclusion and Recommendations

Negotiation has major influence on achievement of procurement goals because majority of respondents strongly agreed and agreed that negotiation plan contributes positively to achievement of procurement goals with an average mean value of 3.8 and average standard deviation of 1.25 which means that achievement of procurement goals resulted from effective negotiation is influenced by effective negotiation plan at PSSSF. The findings also concluded that achievement of procurement goals as a result of effective negotiation depends on proper negotiation plan in Public sector which proves that there is positive and significant effect between negotiation plan and \achievement of procurement with a significant value of 0.000($P < 0.000$).

Under this part the researcher presented the recommendations which were based on the findings of the study, analysis and conclusions. Based on the findings it is recommended that the Government, policies makers have great impact on the achieving procurement goals through effective negotiation and therefore they should put more emphasis on enforcing policies that improve negotiation which increase performance of procurement goals in Tanzania by developing proper and comprehensive negotiation framework with regard to procurement functions in order to provide guidelines for proper execution of procurement negotiation. The management of PSSSF- Head Office - Dodoma, should ensure that they comply with the current legal framework by ensuring that all audit procedures are adhered to by negotiation committee and negotiation as well as management team within the organization. Practitioners and

professionals should provide training on the use of the effective negotiation to the employee in order to increase their competence prior commencement of the negotiation functions and should be recognized during entry meeting of the negotiation exercise.

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Challenges Hindering Business Women Access to Special Group Loans in Dodoma City Council, Tanzania

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Abstract

The challenges women have in obtaining special group loans from the Dodoma municipal council are examined in this study. 97 businesswomen from Dodoma city were randomly chosen for the study, and key informants were purposefully chosen from the government. WEOs, Council Business Officers, and Community Development Officers are a few examples of these public servants. Data analysis for the study included both descriptive and inferential statistics. The results demonstrate that a bad loan system causes problems with loan distribution because most borrowers shift from one location to another without telling anyone in charge. Additionally, internal migration, a bad information system, and a bad borrowing mentality are obstacles that the authority faces in providing business women with special group loans. The paper goes on to say that a bad loan system causes problems with loan distribution because most recipients migrate from one location to another without telling the appropriate authorities. Then, it is advised that business women spend money obtaining various business skills that will enable them to use and manage the loan successfully.

Key words: challenges, loans, special group, women, business

Introduction

Lending to the needy through organizations rather than individuals has gained popularity as a means of reducing poverty (Paxton, Graham, & Thraen, 2000). Women's behaviors in Sub-Saharan Africa (SSA) have a negative impact on women's overall wellbeing and are therefore viewed as a severe societal issue (Paula & Okechukwu, 2017).

In comparison to men, Tanzanian women have lower economic and social status. The majority of women suffer from customs and conventional ideas, are undereducated, and are destitute (Wakara, Jumanne, Nyabakora, & Laurent, 2020). As a result, one of the major challenges in Tanzania and sub-Saharan Africa is the empowerment of women. However, women in Tanzania believe that semi-formal capital, such loans from the government, MFIs, SACCOS, and VICOBA, is the most easily accessible external capital (Lindvert, Yazdanfar, & Boter, 2015).

With the intention of assisting economically disadvantaged populations that were unable to obtain loans from financial institutions due to a lack of collateral, the government seed money for women, youth, and PWDs was first created by resolution of the parliament in 1993 (Said, 2021). Nevertheless, local council empowerment loans were only given out at 5% for women and 5% for youth, leaving out PWDs, in spite of the decision passed by the parliament. The interest rate on the loans was set at 1% (Kitabu, 2021).

Women are more prevalent because of poverty, which has also increased their vulnerability because they are often thought to be contaminated. As a result, these women's entrepreneurship abilities are not geared toward their success in businesses (Kudo, 2017). Despite its negative effects, women have historically had less access to credit and other financial services. Commercial banks frequently prioritize men and formal enterprises while ignoring women, who account for a sizable and expanding portion of the informal sector (Loomba Foundation, 2015). The purpose of this study is to examine the difficulties women face while trying to obtain special group loans from the Dodoma City Council.

The Tanzanian government ordered all local authorities to set aside 10% of their annual revenue exclusively for women, youth, and people with disabilities (PWDs), who lack work, have financial constraints, and have limited access to other opportunities (Semberya, 2020). However, for many years, official government programs and local cultural practices did not directly and effectively work to emancipate women, young people, and people with disabilities (PWDs) economically (Kitabu, 2021).

Nevertheless, social norms-related restrictions, challenges in obtaining financing, and difficulties accessing both public and commercial services exacerbate women's lesser assets and weaker potential to mobilize resources (Gaddis, Rahul, & Wenjie, 2017). For welfare outcomes to be successful, access to one's own revenue sources and bargaining leverage within the

extended family become essential. As a result, women have fewer opportunities to accumulate wealth or generate an income and have less access to a variety of personal coping mechanisms after adverse shocks. They might be more susceptible to shocks than normal (World Bank, 2018).

Additionally, the government of Tanzania struggles with inadequate revenue collection to the LGAs, poor LGA allocation of the 10% of their own sources of revenue to groups of women, youth, and PWDs, which decreases the overall allocation of the money, and occasionally, LGAs with conflicting agendas (Kitabu, 2021). Although the government has taken steps to effectively govern 10% of local council loans for empowering women, youth, and PWDs, there is still a lack of access for women as the special groups to this set aside loan (9% of women had access to financial services, while nearly 30.3% were financially excluded), as was also demonstrated by Said (2021). This study evaluates the difficulties women face in obtaining special group loans from the Dodoma municipal council.

Theoretical Literature Review

Resource based theory

Literature reveals that Wernerfelt created the resource-based theory (1984). This idea essentially contends that internal resources managed by a corporation have the potential to be a source of long-term competitive advantage since they are valuable, uncommon, difficult to duplicate, and non-substitutable. Theory is concentrated on the resources and capabilities owned and controlled by the organization, which can increase the competitive advantages of the organization in terms of cost, time and quality. First, talks about the product from valuable resources being gladly purchased by consumers at a price much greater than the firm's costs to introduce such products onto the market. Second, describe output when it is limited in supply and therefore scarce. Third, provide output details when it is tough to be copied or purchased by rivals. According to Backman, (2015) the performance of any organization depends more on resource availability.

As a result, based on this research, the resources available that operating in cities like in those of Dodoma City especially financial resources that means capacity to finance the small business women in Dodoma City and human resources including potential skills of employee in the

Dodoma City Council that will enhance the performance of loan transaction and empower those small business women to repay back such loan.

Empirical Literature Review

The study was conducted in Nakuru Kenya about challenges facing women in accessing credit from microfinance institutions (Waita, 2012). The population comprised 20 women entrepreneurs who had borrowed before from ECLOF Kenya. Purposeful sampling procedure was used to collect data from 20 members of ECLOF Kenya in the study area. The study findings revealed that each woman borrower may face particular barriers from access to finance, there are significant barriers to financing encountered by various women in business and intending to borrow. These barriers include, collateral requirements, business skills, cultural beliefs, and perception about women's borrowing all have significant effects on financing opportunity available to women.

The study was conducted in Kenya about challenges facing income generating women groups in informal settlements (Abala, 2013). The study employed structured questionnaires and Focus Group Discussions in data collection. The data obtained was analyzed by using Statistical Package for Social Sciences (SPSS) after cleaning, coding, and entering. The findings revealed that women groups in informal settlements have devised various income generating activities to improve their income, have got strict rules and regulations governing their operations and show a strong commitment to what they do in order to improve their socio-economic challenge.

In the study conducted in Tanzania about the challenges facing women entrepreneurs in accessing loans from commercial banks by Amalia, (2020) the primary data collection was done by using closed questionnaire whereby 120 respondents were involved to meet the objectives of the study. The researcher used multiple regression models with the support of SPSS software to analyze the data obtained. The findings show that four factors were observed to have an influence on accessibility to finance where interest rates, financial literacy, and collateral were observed to have positive influence while loans term and condition factor had a negative impact to the dependent variable.

Research Methodology

The study adopted qualitative and quantitative approaches where by explanatory sequential design was used to direct the study, in which the researcher first gathers and analyzes quantitative data before correcting and evaluating narrative data that relate to the quantitative results (Creswell, 2012). The researcher utilized this design to gather quantitative data in the first sentence, and then used it to gather qualitative data to supplement the quantitative data in the second.

Businesswomen engaging in special loan applications to the Dodoma City Council were the study's target demographic. 100 businesswomen who participated in applying for special group loans in Dodoma city made up the study's sample size. Only 97 questionnaires were returned for analysis due to the presence of incorrect estimates, including missing questions.

The study employed simple random sampling and purposive sampling to produce a sample that accurately reflected the vast majority of the people in the relevant area that shared the same characteristics. Women in Dodoma city who were able to get special group loans were chosen through simple random sampling. In order to get a specific type of information from participants, the researcher employed maximum variation sampling (purposeful sampling), which involved formulating questions and choosing candidates from a wide range of applicants who were relevant to the study's topic (Creswell, 2012). Purposive sampling was utilized in this study to identify Dodoma city council members with specific knowledge about the special group loan to women. WEOs, Council Business Officers, and Community Development Officers are a few examples of these public servants.

This is a reference to methods used to obtain data that is physically analyzed in a research study (Johnson & Christensen, 2017). The two types of data are main and secondary. Interviews and surveys served as the study's primary data sources, with a secondary data source being a documentary evaluation.

As part of the questionnaire completing process, study participants were requested to supply personal information. Both open-ended and closed-ended questions were used in the study. Unstructured interviews were employed in this study to allow the researcher and respondents to ask and answer questions at their own discretion while still in the field. By conducting unstructured interviews, the assurance of collecting information from government officials was attained. Asking the consent of the study's informants was the first step in the interviewing process. The interviewees were asked four questions, and the researcher was able to take notes

in a notebook and record the audio using a smartphone. This allowed the process to be carried out in a very cordial way. Additionally, the researcher looks at a number of documents, including reports on community development, council business, and government policy.

Data analysis is the organization and interpretation of empirical data to provide context. Unlike quantitative research, qualitative studies start their data analysis during the data collection phase. The study used content analysis to analyze qualitative data. The researcher first paraphrased the qualitative data to prevent information duplication. To make sense, the information was arranged appropriately. After being analyzed and presented, quantitative data was supported by qualitative data. As an analytical tool for the study, SPSS software was utilized to evaluate quantitative data. Texts, charts, and tables were used to present the data after it had been coded. In this investigation, frequencies, percents, means, and standard deviation were calculated using only descriptive statistics.

Findings And Discussion

This section presents the findings and discussion about the challenges women have in obtaining special group loans from the Dodoma municipal council are examined in this study.

Business skills

The quantitative data acquired through open-ended questions showed that the majority of business women (N=73, 100%) identified a lack of business skills as a barrier to accessing special group loans. These findings suggest that women's lack of business abilities prevents them from recognizing their borrowing needs, which prevents them from obtaining special group loans. The capacity to do a business task successfully with specified performance and results within a specific time, material, financial, managing power or other types of resource is known as a business talent (Kolmar, 2021). For that fact, business women are not effective in determining their performance with the specific resources they have.

According to the quantitative data acquired through open-ended questions, the majority of business women (50.7%, N=37) identified inadequate information asymmetry as a problem they faced and a barrier to their ability to get specialized group loans. According to these findings, there is a greater probability for special group loans to be hard to obtain when there is an informational mismatch between the lenders and borrowers in the council.

According to the study, when one side to a transaction has access to more information than the other, there is inadequate information asymmetry. Due to the asymmetric information present in this transaction (borrowing), where the lender (government) is more knowledgeable about the service than the borrower (Bloomenthal, 2021). As a result, in this study, the government has more knowledge about special group loans than do businesswomen, which results in a lack of knowledge about the services available to businesswomen and a low rate of access to special group loans.

According to the quantitative data acquired through open-ended questions, the majority of business women (34.2%, N= 25) identified bureaucratic procedures as a difficulty they faced and a barrier to obtaining special group loans. These findings show that numerous bureaucratic procedures carried out by government employees from the first loan application stage to the final approval stage tire needy company women and consequently affect their inability to obtain special group loans. According to the study, bureaucracy is an organizational, governmental, or social system that has a hierarchical structure and intricate rules and regulations. Decision-making is slowed down by the systems and procedures that have been put in place (Banton, 2020). As a result, the government makes applying for a loan more difficult by enforcing procedures that are largely unnecessary. This slows down the decision-making process for loan applications.

Table 1: Challenges hindering women in accessing special group loans

Challenges	Responses		Percent of Cases
	N	Percent	
Bureaucracy	25	13.6%	34.2%
Business skills	73	39.7%	100.0%
Unrealistic objectives	24	13.0%	32.9%
Credit crunch	25	13.6%	34.2%
Poor information asymmetry	37	20.1%	50.7%
Total	184	100.0%	252.1%

Credit crunch

According to the quantitative data obtained through open-ended questions, the majority of business women (34.2%, N= 25) identified the credit crunch as a problem they faced and a barrier to their ability to get specialized group loans. These findings suggest that the credit crunch made it harder for business women to get larger loans, which contributed to a lack of services that were necessary. An economic situation where financial institutions restrict their lending activity or tighten the standards for receiving a loan, making loans less available, is known as a credit crunch, also known as a credit squeeze, credit tightening, or credit crisis. Due to the credit crunch in this study, which is the government's fault, business women have less access to specialized group loan

Unrealistic objectives

The quantitative data obtained through open-ended questions showed that the majority of business women (32.9%, N=24) identified unrealistic goals as a difficulty they faced and a barrier to obtaining specialized group loans. These findings suggest that not all of the group members who have applied for loans share the same borrowing goals. Everyone has their own aims, target, and output because when there is a misalignment of the objectives, business failure is close by. Because of this, it is unrealistic goals that prevent business women from accessing specialized group financing.

Poor information asymmetry

The quantitative findings gathered through open ended questions revealed that majority of business women (50.7%, N= 37) indicated poor information asymmetry as a challenge they encountered and hindering them to access special group loans. This results imply that the mismatching of information between the borrowers and the lender in the council lead to the reduction of trustworthiness between them and thus increases the tendency of low access of special group loans. The study found that poor information asymmetry is when one party in a transaction is in possession of more information than the other. In this transaction (borrowing) lender can take advantage of borrowers because asymmetric information exists whereby the lender (government) has more knowledge of the service than the borrower (Bloomenthal, 2021). Therefore, in this study the government has more information about special group loans more than business women and thus lead to insufficient of information about the service to business women which lead to the low access of special group loans.

Bureaucracy

The quantitative findings gathered through open ended questions revealed that majority of business women (34.2%, N= 25) indicated bureaucratic procedures as a challenge they encountered and hindering them to access special group loans. These results imply that a lot of bureaucratic procedures which are conducted by government officials from the first stage to the last stage of loan application led to the exhaustion to among needful business women and thus influence the low access to the special group loans. The study noted that, bureaucracy is an administrative, government or social system with hierarchical structure and complex rules and regulations. The systems and process that are put in place effectively make the decision-making slow (Banton, 2020). Therefore, the government makes the process of accessing loan very slow due to the procedures which are most irrelevant and thus makes the decision-making of loan's application to be very slow

Conclusion And Recommendations

Conclusion

According to the study's findings, a bad loan system causes problems with loan distribution because most recipients move from one location to another without telling the appropriate authorities. Therefore, since the government offers this type of credit without requiring collateral or paying interest, once the beneficiary goes missing there is no way to get the money back. One barrier for business women to accessing special group financing is a lack of business expertise. Lack of business abilities prevents women from understanding their borrowing needs, which prevents them from obtaining special group loans. Because of this, businesswomen find it difficult to assess their performance given the particular resources at hand. Additionally, there is a positive significant correlation between business skills and access to special group loans in the public sector; for every unit increase in business skills, access to special group loans increases by a specific percentage.

The following recommendations have been made to policymakers, government loan officials, businesswomen, and other special groups in Local Government Authority based on the study's results and conclusion.

- Businesswomen should invest in learning various business skills that will enable them to use and manage the loan successfully. Older businesspeople with

relevant expertise can teach you the necessary abilities. Additionally, a variety of enterprises and organizations that offer training to SMEs and other types of businesses may be able to help them develop effective business skills.

- The reformation of special group loans should be facilitated by the decision-makers so that the loan system is appropriate and long-lasting. The policy should outline the sustainability environment in a way that encourages participation from both lenders and borrowers in developing an efficient lending system where the means and effects are anticipated and achieved at a predetermined point in time.
- Government loan officers should provide customer care during and after loan applications to the beneficiaries in accordance with their needs. Due to the beneficiaries' freedom to apply for loans without fear and their success in repaying them, this will enhance access to special group loans.

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The Effect of Factors Inhibiting Credit Access to Small-Scale Rice Farmers' Livelihood in Mbarali District

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Abstract

Despite the available financial institutions in Tanzania, yet the lives of majority small-scale farmers had not been to expectation. Most of small-scale farmers are still using poor farming equipment which had accelerated low crop yields. Therefore, the aim of the research was to assess the Effect of factors inhibiting credit service access on the livelihood of small-scale rice farmers. The research employed a descriptive design whereby both qualitative and quantitative methods were applied. A sample size of 80 small-scale rice farmers were used in this study randomly selected from the population of rice producers. The questionnaire and interview methods were used in data collection. The findings indicated that farm credit charges, credit sources, interest rates, loan application procedures and collateral requirement were suggested as factors inhibiting small-scale farmers from accessing credit facility. Finally, the study recommended that, the government of Tanzania through the ministry of agriculture in collaboration with other development partners also need to take deliberate initiatives by introducing suitable agro-financing policies that carter to promote the development of the agriculture sector which employs majority of the people than other sectors of the economy.

Keywords: agriculture, agricultural finance, financial services, small-scale farmers.

Introduction

The availability of financial services is essential for improving income of countryside farmers who are the majority population of Tanzania, and whose economy mainly depends on agriculture. Several financial services are provided by financial institutions such loan facilities, savings, insurance, entrepreneurship training just to mention few (Kinisia, 2019).

The question of concern here is if at all these services provided have transformed the living standard of farmers generally.

However, through various literatures reviewed, it has been observed that lives of majority small scale farmers in Tanzania and Africa in general are still poor. The question to ask here is if existence of these financial institutions is really a solution to the problem under the study (Mwambungu, 2019).

The provision of credit services to small scale rice farmers is one of the key instruments for rural development, which ensures sustainability of small scale farming and hence improved agricultural yields (Mbonanga, 2019). Several literatures discovered that accessing credit services among farmers has a positive result on the production performance of small scale rice farmers and hence improved livelihood (Chongela, 2015; Mbonanga, 2019).

In Tanzania for example, small scale rice farmers dominate the agriculture sector by contributing more than 75 percent of the total agriculture products (FAO, 2015). However, the production capacity of small scale rice farmers is lower similarly to other developed nations. The small scale rice farmers in Tanzania are still facing the challenge of limited access to credit services which in turn affect their production performance (Mwang'onda et al., 2016).

To rectify constraints and challenges of agricultural sector, the Government of Tanzania (GoT) introduced the Agricultural Sector Development Strategy (ASDS) in 2016 aiming at achieving agricultural growth rate of at least 6 percent by 2025. The ASDS had five strategic areas *inter alia* improvement of finance access to small scale commercial farmers. ASDS came in place in recognition that foundation for achieving six percent among rural farmers was completely lacking access to agriculture financial services. Thus far, researches on agricultural finance show that ease of access to agricultural finance services is prerequisite requirements for commercial rural farmers and poverty alleviation at large (Sigh, 2019). In response, improving farmers' access to financial services is the highest Tanzanian government priority. The premise behind is that improving financial services access is the foundation for improving livelihood of common individuals in rural settings (Onwunali, 2019). So far, there have been several devoted efforts like introduction of Kilimo Kwanza as well as Private Agricultural Sector Support (PASS) which were means for intensifying financial service access to small scale farmers in rural areas. Some of the financial services directed to small scale farmers include loans, credits, warehouse receipt systems, savings, deposit service, insurance, money transfer and social security (Mwambungu, 2019).

Despite devoted efforts by the Tanzanian government and other stakeholders, the output has not been up to expectations (World Bank, 2020). Small scale farmers still lack access to financial service as consequences their livelihood continued to deteriorate. This research was thus set to address the effect of credit access to small scale rice farmers' livelihood in the selected financial institutions in Mbarali district. Doing research in agro-financing proved beneficial to several stakeholders including policy makers, financial institutions, literature inventory and small scale farmers. It registered new insight, and sealed the unknown knowledge of rural financing contribution towards agriculture financing gap and improvement of small scale rice farmers' livelihood in rural setting. The study generally assessed the effect of credit access to small scale rice farmers' livelihood in the selected financial institutions in Mbarali district, Tanzania. More specifically, the study; examined the determinants of access to credit among small scale rice farmers, assessed the perceptions of financial institutions to small scale rice farmers, and determined the effect of factors inhibiting credit access to small scale rice farmers' livelihood in Mbarali district.

Literature review

Theoretical review

This study was guided by two theories namely Stakeholder theory and Grameen bank model. The Stakeholder theory was at first proposed by Edward Freeman in 1984 whereby the emphasize was on addressing morals and values in managing organizations. The theory defines stakeholders as groups or individuals who benefit or suffer from an organization performance. These include shareholders, creditors, customers as well as the community. The proponent of the stakeholder theory relies on the assumption that organizations have the duty to make sure that their performance fulfills the prospects of all stakeholders (Freeman *et al.*, 2004). However, according to Capron (2003), the critics of the stakeholder theory rely on its inclusion of non-human stakeholders such as the natural environment. In addition, Phillips and Reichart (2000) argued that only human beings can be considered as organizational stakeholders and criticizes attempts to give the natural environment a similar status.

Similarly, the Grameen Bank Model (GBM) was advocated by Prof. Muhammad Yunus in Bangladesh, in the year 1976 as a project to investigate the effectiveness of financial product delivery system on providing financial services to the rural poor. It is run by making small loans (known as micro credit – grameen credit) available to the disadvantaged without requiring collateral. The primary mission of GBM was to empower the rural poor and so far, it

has attracted extensive appreciation in recent decades and is being adopted by various nations around the globe. (Suzuki *et al*, 2011).

In practice, Grameen Bank allocates credits to the poor in rural locations and design trouble-free financial services method with the most comfortable repayment method without imposing difficult conditions because its concern is financial service access to achieve improved livelihood (Shukran& Rahman, 2011). GBM is to the effect that “Little you have, more attractive you are, if you have nothing you will get the highest priority.” By implication, Grameen Bank often focus on putting financial services available to the rural poor who are the people with landless, poor livelihood as well as vulnerable.

With regard to structure and institutional framework, according to Yunus (1976), GBM is operated in three steps before the rural poor receive financial services. The first step is to create an incentive and trust that everybody is capable to do and receive financial services. Secondly is to prepare the society for working capacity and positioning capacity building program such as training. The third step is to give financial service institutions a proposal which is followed by distribution of financial services for personal investment. Gradually, comes rest of the work such as, fund collection, returns, operations and financial services cost. The choice to deploy Grameen Bank Model (GBM) to support research theoretical framework is based on its relevance to the research conceptual framework. The model is integrated with numerous social implications connected with financial services access to rural poor especially women. In effect, GBM towards financial services access brings additional social benefits including improving livelihood standard of the poor. This is possible due to GBM exclusive characteristics on financial service provision process to startup businesses and produce income that influence better livelihood.

Empirical review

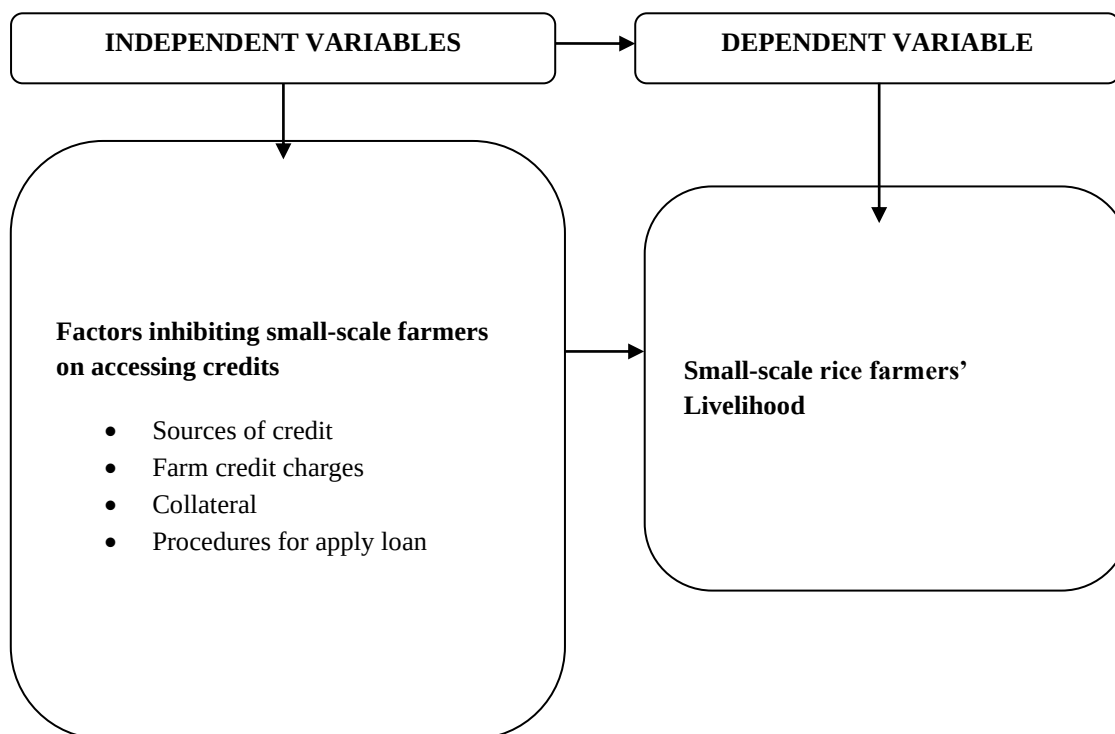
Motsoari *et al*. (2015) analyzed issues affecting access to credit for small scale agricultural sector in Lesotho. The research was conducted based on the fact that agricultural sector in Lesotho is not performing as expected due to inability of small scale farmers transform from traditional agriculture to a more scientific and technology-based one. The aim of the research was to examine factors that may influence the ability of small scale farmers to access finance by making use of a logistic regression model within the principle component regression framework. The results revealed that the ability of small scale farmers to access finance, and the potential to make the transition towards a more scientific and technology – based

agriculture sector, is influenced by the level of farm and non-farm income, farm size, availability of family labour, land ownership, savings and repayment ability.

The results present important information in terms of guiding institutional arrangements needed to improve credit availability in Lesotho. Mukabane (2021) also conducted a study investigating issues that affect access to formal credit among small scale farmers in Busia Count, in Kenya. However, the research intended to create characteristics of small scale farmers that decide access to credit and economic characteristics that affect access to credit. The data was collected from a cross sectional survey of 375 rural households who were proportionately sampled from a population of 15,705, interviewed 2 K-Rep officers, two officers from Agricultural Finance Corporation, and two officers from Kenya Women Finance Trust. Interviews, structured questionnaires, observation and document analysis were used to collect quantitative data from the sampled households. Descriptive and linear regressions were used to analyze quantitative data. The study results showed that the joint effect of the explanatory variables in the model accounted for 90.6% of the variations in the factors affecting the farmers' credit access. Sixteen out of the eighteen variables are significant at 5% and hence greatly influence credit access. It was only the marital status and sales increase for the past two years that did not have a significant coefficient. The results revealed that 32.9% of small scale farmers accessed agricultural credit, whereas 67.1% did not access credit.

Girabi *et al.* (2013) investigated the impact of microfinance on small scale farm productivity in Iramba, Tanzania. A total of 98 respondents were selected randomly from credit beneficiaries (CB) and non-credit beneficiaries (NCB). The collected data were analyzed through descriptive statistics and multiple regression analysis. The findings depicted that CB realized high agricultural productivity compared to the NCB respondents. This is partly because the CBs were relatively better in accessing markets for agricultural commodities, use of inputs and adoption of improved farming technologies. Lastly, the study highlighted major factors hindering small scale farmers' access to credit as lack of information, inadequate credit supply, and high interest rates and defaulting.

Regarding several studies reviewed, it is obvious that the challenge of credit facility among small scale farmers is derived from a number of factors, but more specific the study intended to measure the effect of factors inhibiting credit facility access to small-scale rice farmers' livelihood in Mbarali district.



Source: Field data, 2022

Method

This research was conducted in Mbarali district as one of the districts of Mbeya region. The selection of Mbarali district was due to its potential in rice farming and the abundance of such crop grown. This research adopted a descriptive survey design. Descriptive research portrays an accurate profile of persons, events, or situations. Survey allows the collection of large amount of data from a sizable population in a highly economical way. It allows one to collect quantitative data which can be analyzed quantitatively using descriptive and inferential statistics (Saunders *et al.* 2009). Therefore, the descriptive survey was employed as the best strategy to fulfill the study objectives. Generally, the study population was small scale rice farmers, loan officers and managers from visited financial institutions in Mbarali district since the area is well known for rice farming practices and a food reserve of the country.

Probability and non-probability sampling techniques were used in this study. Simple random sampling as a probability sampling technique was used to select 100 small scale rice farmers in Mbarali district whereby every small scale rice farmer has equal chance of being selected.

On the other side purposive sampling as a non-probability sampling technique was used to select loan officers from financial institutions such are banks and other micro credit institutions in Mbarali district. In this research, the sample size was obtained through Yamane formula in a population of 300,517 residence of Mbarali district (NBS, 2012). The sample size was derived from the following formula generated by Yamane (1967) which is;

$$n = \frac{N}{1+N(e^2)}$$

Whereby n = Sample size, N = Population size = 300,517 while e = Level of precision of sampling error 10%. Thus, the sample size of this study was 100 respondents including loan officers and managers from financial institutions as well as small scale farmers' representatives in Mbarali district. In order to obtain reliable information that would answer the research questions, the researchers provided and administered survey questionnaires to small scale farmers while interview was administered to loan officers of sampled financial institutions and farmers' representatives (leaders) since these are knowledgeable enough, experienced on the issue and were ready to provide the required information.

Both open- ended and close-ended questionnaires were employed during the study, the reason to employ both open and closed ended questionnaires was that, closed questions were less time consuming and simple to answer and could not offer a room for respondents to express their feelings while open questions allow respondents to include more information such as feelings, attitudes, opinions and understand the subjects. Equal chances were given to respondents to fill up the questionnaires. Moreover, direction and assistance were provided by the researcher to respondents where necessary. The combination of various methods of data collection like questionnaire, interviews and documentary reviews ensured that the collected information was not biased to a single method. Consequently, careful sampling of respondents and proper use of instruments were means to ensure validity of the research information. Data collection instruments were designed in such a way that provides accurate and consistent results throughout.

Given the importance of validity, all instruments were checked in preliminary literature review. Research reports suggest considerable validity of all instruments selected for this research. Mtuma et al (2017) and Massawe (2020) tested validity of instruments selected for this research through expert review during pilot studies, prior main studies. Pilot study was conducted and adjustments were made accordingly on data collecting instruments. On this background, the researcher thought safe. The researcher sought a clearance letter from the

College of Business Education, (CBE) which was granted after fulfilling the required procedures. The letter enabled the researcher at different levels of management in Mbarali district get permitted to collect information. However, the researcher adhered to research ethics during development of instruments and administration of data collection in order to avoid any harm, suffering or violation of privacy. Data collected were summarized, coded and analyzed using multiple linear regression model which is suitable for indicating variable correlation (Kothari, 2015).

Findings and discussion

The study purposely intended to examine the effect of factors inhibiting credit access to small scale rice famers' livelihood. These factors were associated with sources of credit, farm credit charges, collateral, loan application procedures and high interest rates charges as proportionately tabulated below.

Table 1: Factors inhibiting small scale rice farmers from accessing credit

Factors	N	Percent	Percent of cases
Sources of credit	47	26.1%	58.8%
Farm credit charges	36	20.0%	45.0%
Collateral	44	24.4%	55.0%
Procedures to apply loan	22	12.2%	27.5%
High interest rates	31	17.2%	38.8%
Total	180	100.0%	225.0%

Source: Field Data, 2022

Sources of credit

From Table 1 above, the findings revealed that 58.8% of respondents mentioned sources of credit as one of factors inhibiting small scale rice farmers from accessing credit service in financial institutions. These findings imply that, in many areas sources of credits are not fairly available to farmers and hence entails that the little available farm credits are provided at higher charges whereby majority intended beneficiaries cannot afford. These results are in harmony to those of Mukabane (2021) on a study investigating factors that affect access to

formal credit amongst small scale farmers, and reported that 32.9% of small scale farmers accessed agricultural credit, whereas 67.1% had no credit access. For that supportive literature, concludes that the source of credit services inhibit access to credit among small scale rice farmers. Also, the qualitative findings supported this by exhibit:

“... Of course there is a problem of insufficient sources of credit in Mbarali especially to small scale farmers because there are few financial institutions which are specifically serving small scale farmers...” (Interview made with participant No.4).

Theoretically, regarding sources of credit, the stakeholder theory by Edward Freeman in 1984 supported these findings by indicating stakeholders as groups or individuals who benefit or suffer from an organization performance, which include shareholders, creditors, customers and the community at large. Therefore, this theory verifies that limited available sources of credits lead to insufficient credit accessibility among small scale rice farmers especially in Mbarali district.

Farm credit charges

For the sake of farm credit charges, the findings again revealed that 45.0% of the respondents declared farm credit charges as one of factors inhibiting small scale rice farmers from accessing credit services in financial institutions (Table 1). These results imply that high farm credit charges imposed on farm tools to a greater extent inhibit the level of access to credit from financial institutions. For that reason, these findings are against theoretical implication of stakeholder theory which was proposed by Freeman in 1984. The theory suggests that, stakeholders are groups or individuals who benefit or suffer from an organization's performance which includes shareholders, creditors, customers and the community at large. Therefore, high farm credit charges impede the accessibility of credit from financial institutions as it was verified by the stakeholders' theory.

Collateral

Regarding collateral, research findings from Table 1 also revealed that 55.0% of cases of respondents mentioned collateral as one of factors inhibiting small scale rice farmers from accessing credit services in financial institutions. These results imply that for small scale rice farmers without collateral were not in position of accessing credit service from financial institutions. The research findings agree to those of Muiruri *et al.* (2016) who established that socio-economic constraint collateral as one of the critical determinant of access to credit.

Therefore, lack of collateral lead to lack of credit access from financial institutions. The study findings were also supported by qualitative findings which exhibit:

“... We are not providing credits to individuals without collateral. They must otherwise form business groups among themselves which in turn act as collateral. Normally we are encouraging women who are in different businesses to form groups so that the loan applied can be distributed to each of the members...” (Interview made with participant No. 8)

On the other side, the Grameen Bank Model (GBM) by Yunus (1976) emphasized by recommending on the need for collateral to support the poor farmers like those of Mbarali district. Furthermore, the model established the financial delivery system that carter to ease provision of financial services to the rural poor. The model therefore, insisted that there must be small loans such as micro credit available to the disadvantaged without requiring collateral and thus increases the accessibility of credit to the financial institutions and hence livelihood would be realized among small scale farmers.

Loan application procedures

For the sake of procedures in applying loan, the findings in Table 1 above indicated that 27.5% of cases of respondents mentioned procedures stipulated for applying loans as one of the factors inhibiting small scale rice farmers from accessing credit services in financial institutions. These results imply that there are a lot of procedures preceded the issuance of loans which results to longer processing time taken and eventually farmers lose hope of accessing such particular credit from such financial institutions. These findings are in harmony to those of Muriuri *et al.* (2016) who discovered that institutional requirements such as costs involved in operating or maintaining bank accounts, loan requirements and other transaction costs involved in the loan process influenced access to credit. Therefore, the presence of such procedures in the process of loan application greatly inhibits small scale rice farmers from accessing credit services in financial institution

Conclusion and recommendations

ConclusioThe main objective of the study aimed to examine the effect of factors inhibiting credit access to small scale rice farmers' livelihood in Mbarali district. From the statistical results, it was summarized that level of awareness, farm size, farming experience and membership criteria were factors contributing to credit facility from financial institutions. However, qualitative findings indicated that financial institutions perceive investing in agriculture as a riskier business especially when engages small scale farmers who are not

members of any cooperative union. Also the findings revealed that higher default rate is another perception from financial institutions that could have resulted to limited access to credit facilities among small scale rice farmers. Furthermore, sources of credit, possession of collateral, farm credit charges and loan application procedures were among factors inhibiting small scale rice farmers from applying farm credit.

Recommendations

Based on the conclusions made and with respect to the current vision on financial inclusion for the rural poor, it was realized that when production capacity of small-scale rice farmers is improved will consequently provide assurance for food security at family and national level whereby the surplus could be sold to cover other cost of living and hence improve the livelihood of the rural population who are small scale farmers in nature.

The government also needs to impose an insurance scheme for agricultural investments particularly those involving small scale farmers so as to build trust not only to farmers themselves that will be safe in case of unplanned natural calamities but also as a risk mitigating approach for financial lenders that would not have been interested in providing agriculture credit to small scale farmers.

Nevertheless, findings indicated that most of the financial institutions available in rural areas including Mbarali district were willing to provide agro-financing support among small scale rice farmers and would be ready to extend their credit services to this isolated cadre of the economy if there could be good policies enabling the facilitation of farm credits. It was also recommended that the government through the responsible ministry of agriculture to facilitate this important sector of the economy by extending farm credit facility through the locally available financial institutions as a strategy of softening and mitigating challenges related to credit provision along with suitable policies that could in turn open up windows for small scale farmers to obtain credit service from financial institutions at affordable terms so that a large percent of small scale farmers could be accommodated and hence improve their farm yields and therefore better livelihood.

Area for further studies

In this study, the researcher examined the effect of factors inhibiting credit access to small scale rice farmers' livelihood in Mbarali district. Moreover, conclusion was derived based on the data collected from 80 sampled respondents in the area of study. The findings might be

biased in nature since Mbarali district is just one of the areas where rice farming is practiced in Tanzania and there could be other challenges associated to credit provision for small scale rice farmers if the study would be conducted to other areas where rice is grown. Further studies may take into account the financial base of most microfinance institutions available in rural areas and their capacity to service small scale rice farmers so as to increase the reliability of the findings which covers different small scale farmers from several areas of Tanzania where rice is considered a chief economic activity.

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Factors Influencing the Acceptance of Electronic Banking Transactions In Financial Institutions In Tanzania

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Abstract

The purpose the study was to investigate the factors influencing consumers' acceptance of electronic banking services in Tanzania, the case of CRDB Bank PLC Limited. The specific objectives were to assess the customer's attitudes towards the acceptance of electronic banking; to determine the customers' subjective norms towards the acceptance of electronic banking; to determine the customers' behavior intention towards the acceptance of electronic banking; the study employed primary and secondary data. A sample of 100 respondents was drawn from the target population. Quantitative data were analyzed by using Pearson correlation analysis and multiple linear regression analysis. The findings showed that attitude(ATT) and behavior intention(BI) has a significance influence an acceptance of electronic banking; whereas Subjective norms(SN) has no significance influence an acceptance of electronic banking; The banking sector in Tanzania should make the business efforts in understanding on what customers' needs in terms of understanding their attitudes and behavior intention in order that, they can further acceptance the electronic banking products and services and find out other factors other than the subjective norms that can influence the acceptance of electronic banking in the banking sector at CRDB Bank PLC. The study contributes to the body of knowledge by validating the Theory of Reasoned action(TRA) in terms of attitude, behavior intention to be the significant predictor of acceptance of electronic banking products and services for commercial banks in Tanzania , while Subjective norsm as being not the predictor b of acceptance of electronic banking products and services in Commercial banks of Tanzania.

Keywords; *Attitude, Subjective norms, Behavior Intention, Acceptance, Electronic banking*

Introduction

Advancement of Digital technology has changed the pattern of business life and how money transactions are done (Lee, 2009). Consumers are currently changing on banking transactions from the traditional banking of carrying a lot of money (cash) to cashless transactions (Chaffy, 2021)

Electronic banking used in this study is the use of digital channels in the transferring of financial transactions from the financial institutions to the customers and vice versa through wireless communication (Chaffy, 2021). Products and services can include the banking account transactions in the form of withdrawing and deposits, banking overdrafts, electronic money transfers via Personal computers, smartphones, Ipads and personal Digital Assistants (Zafar *et al.*, 2021)

The advantages of electronic banking include the increase in sales growth of the financial institutions and thus reduces the time on the customers in receiving and undertaking the banking services and ultimately reduces the transactions to both the bank and the customers, which has an effect on cost effective in business transactions (Aladwani; Jayawardhena & Foley, 2000).

Introduction of electronic transactions in financial institutions is has benefits on the society and business (Kabanda & Brown, 2015). For despite that most of the acceptance of electronic banking transactions in developing country is still in small amount especially in Africa (Chille *et al.*, 2021). Electronic banking which is an important channel in financial transactions is mostly used in developed countries in the delivering services to their customers specifically in developed countries like United States, United Kingdom and Asian countries such as China (Mehra *et al.*, 2020). The common mobile devices used developing countries particularly in Tanzania in electronic banking transactions the mobile phones (Chille *et al.*, 2021)

As per TCRA report of 2021 April to June indicated that 53.1 million of individuals in Tanzania are electronic money subscribers and 33.2 million use mobile payment and mobile banking, which left over about 20 million subscribers using the electronic services for non-business transactions (Chille *et al.*, 2021). Despite all these developments in use of electronic money services using mobile devices such as mobile phone services, personal computers and mobile money transfers, usage of banking services and mobile banking, in particular, has remained low in Tanzania (Chille *et al.*, 2021). This indicates that in developing countries, particularly in Tanzania, customers are still hesitant to acceptance electronic banking services, and they may do not have sufficient ability to deal with the applications of electronic banking (Chille *et al.*, 2021; Kabanda & Brown, 2015). However, due to the current development of the digital technology from web 2.0 to web 4.0, there are scanty of studies guided by the theory of reasoned action (TRA) regarding attitude (AT), subjective norms (SN) and behavior intention (BI) assessing the factors influencing the use of electronic banking transaction in financial

institutions in Tanzania (Chille *et al.*,2021; Lwoga & Lwoga,2017; Mutalemwa,2014). Therefore, the current study investigates the factors influencing the use of electronic banking services, by assessing regarding the customer's attitude, subjective norms and behavior intention on the use of mobile banking services in Tanzania at CRDB Bank Limited PLC.

Various studies have been done to assess the on the factors influencing the acceptance of electronic banking in both developed and developing countries specifically in Tanzania (Abinoor & Mbamba, 2017; Chille *et al*; 2021; Lwoga & Lwoga, 2017; Mhela, 2019)).). Despite the presence of all these studies, little is known on how on how attitude, subjective norms and behavior intention influence the use of electronic banking in Tanzania. Also, it is theoretically unknown on how the variables from the Theory of Reasoned Action (TRA) influence the acceptance of electronic banking in Tanzania. Therefore, this study filled the gap by assessing on the effects of customer's attitude, subjective norms and behavior intention in influencing the acceptance of electronic banking in Tanzania.

Literature Review and Hypothesis

The Theory of Reasoned action (TRA) has been used in various studies in assessing the factors influencing the acceptance of information technology (Alam *et al.*, 2012 ; Ambali and Bakar, 2016; Davis, *et al.*,1989; Liker and Sindi, 1997) . However, there are paucity of studies which was done in Tanzania on the effects of customer's attitude, subjective norms and behavior intention in influencing the acceptance of electronic banking in Tanzania.

Effect of Attitude

Attitude influences the most on the acceptance of technology when an individual acquires for positive behavior in using technology (Chen *et al.*, 2015). Customer's attitude and perceptions has an influence on acceptance or not acceptance of technology. (Kerr *et al.*, 2015). Based on the objectives of the study, the following hypotheses has been recommended on this study.

H1: Attitude significantly influence consumers' consumers' acceptance of electronic banking transactions.

Effect of Subjective Norms

Subjective norms is the major constructs of TRA which refers on how peers influence an individual decisions towards the use of technology (Ajzen, 1979). Community has greater

influence in acceptance of technology (Kim *et al.*, 2010). Based on the objectives of the study, the following hypotheses has been recommended on this study

H2; Subjective Norms significantly influence consumers' acceptance of electronic banking transactions

Effect of Behavior Intention (BI)

Intention to accept to use information technology is attributed by the positive attitude and subjective norms of individuals of a particular society (Kim *et al.*, 2010). Based on the objectives of the study, the following hypotheses has been recommended on this study

H2; Behavior Intention significantly influence consumers' acceptance of electronic banking transactions

Methodology

Population and sample

The study was done at CRDB Bank PLC in Dar es salaam and assessed the phenomenon under study by using CRDB Bank as a case in point. CRDB Bank in Dar esalaam has been chosen because CRDB bank is the largest bank that issues corporate and retail banking for Small and Medium Enterprises in Tanzania and in the republic of Burundi, with an asset base worth of Tanzanian Shillings (TZS) 7.2 trillion, having with 243 branches, 20 mobile bank units and 17,031 banking agents, with the highest electronic banking services particularly mobile banking(CRDB annual report, 2020)

A five -point Likert measurement scale was used, with 1 indicating “strongly disagree” and 5 “strongly agree”. Attitudes (ATT) was measured by five items, which were adapted from Ajzen (1991); Subjective Norms (PEOU) was measured using five items, adapted from (Ajzen 1991; Venkatesh & Davis 2000), Behavior Intention (BI) was measured using 7 items adapted from (Bhattacharjee, 2001 Venkatesh & Davis 2000); whereas Acceptance of Electronic Banking (AEB) was measured using 7 items adopted from (Davis et al., 1989; Duzevi *et al.*, (2016)

Data Analysis

Demographic characteristics of Respondents

The sample from the population were the customers CRDB Bank Limited composed of customers of the respective bank accounted (60) 60%; 18(18%) were employees, of and which

accounted (12) 12% of the respondents were students and 10(10%) of customers working in the informal sectors which were regarded as being unemployed in the formal sector

Results from Reliability test

In order to measure the internal consistency, the reliability test was undertaken by using the Cronbach's alpha coefficient, And the results were 0.763 to 0.892. Since the minimum cut off point is 0.7(Saunders et al., 2012). As shown in table 1 that indicated that the research instruments were reliable in measuring the studied constructs (Saunders *et al.*, 2012).In order to evaluate that the items were measuring the same constructs, exploratory analysis was done, however, Kaiser Mayer Olkin (KMO) and Bartlett's Test for Sphericity (BTS) were undertaken in testing for the sample adequacy. The results indicated that KMO had value greater than 0.6 which is the cutoff point (had value of 0,8) and BTS were significant with value less than 0.001, thus the data were appropriate for factor analysis (Basto and Pereira, 2012).

Table 1: Reliability and Sample Adequacy

Construct	Reliability (Cronbach's alpha)	Number of items	KMO	BTS (P Value)
Acceptance of Electronic Banking (AEB)	0.852	4	0.825	278.533(0.000)
Attitude (ATT)	0.763	5	0.798	261.065(0.000)
Subjective Norms (SN)	0.892	7	0.878	369.538(0.000)
Behavior Intention (BI)	0.858	4	0.793	211.207(0.000)

Source: Fieldwork, (2022)

Exploratory Factor Analysis Findings

Factor analysis was conducted category which are Acceptance of Electronic Banking (AEB), Attitude (ATT), Subjective norms (SN), and Behavior Intention (BI) category represent the latent variable of AEB, ATT, SN and BI in table 2. This was done through extraction and rotation and realized that a single component was rotated, hence there was none of the component matrix rotated. The determinants (% of variance) were 3.72 (53.319), 3.544(50.632), 123 (76.741), 4.308(61.546) and 2.899(72.467) for the AEB, ATT. SN and BI respectively. For

each latent variable, the contribution from observable variables varied. Cut off point required is above 0.3, and the items having above 0.3 were retained for factor analysis (Basto & Pereira,2012). The results indicated that all variables were suitable for the studied objectives

Table 2: Factor loadings for AEB, ATT, BI and SN

AEB variables		ATT variables	
Extraction Sum of Squared Loadings: Total = 3.732, % of variance =53.319		Extraction Sum of Squared Loadings: Total = 3.544, % of variance = 50.632	
Variable	Factor loadings	Variable	Factor loadings
AEB7	0.835	ATT2	0.774
AEB2	0752	ATT1	0.781
AEB6	0.742	ATT4	0.683
AEB3	0.719	ATT5	0.661
AEB5	0718	ATT3	0.473
AEB4	0714		
AEB1	0.614		
SN variables			
Extraction Sum of Squared Loadings: Total = 4.308, % of variance = 61.546			
Variable		Factor loadings	
SN2		0.816	
SN1		0.806	
SN6		0.798	
SN4		0.790	
SN3		0.788	
SN7		0786	
SN5		0.701	
BI variables			
Extraction Sum of Squared Loadings: Total = 2.899, % of variance = 72.467			
Variable		Factor loadings	
BI1		0.650	
BI2		0.829	
BI3		0.799	
BI4		0.621	

Source; Field work, 2022

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Only one component was extracted per each construct from its related variables.

The solution was not rotated (No rotated component matrix)

Results from Correlation Analysis

In order to establish the strength of association among variables. Correlation analysis was undertaken. As per Kothari & Carg (2012) correlation results from 0.00 to +/-0.30 indicates little correlation; +/-0.30 to +/-0.50 shows low correlation; +/-0.50 to +/-0.70 moderate; +/-0.70 to +/-0.90

. Multicollinearity is possible in the model when $r \geq \pm 0.9$ (Senthilnathan, 2019) The findings in table 3 shows correlation ranges from $r = 0.530$ to $r = 0.733$ at $p < 0.01$, that implies that independent variables has association with the dependent variable (Acceptance of Electronic Banking (AEB))

Table 3: Correlation Analysis between variables (N=100)

Variable	AEB	ATT	SN	BI
AEB	1	0.695**	0.530**	0.659**
ATT	0.621**	1	0.695	0.656**
SN	0.530	0.695	1	0.733
BI	0.626	0.659	0.733	1
N	100	100	100	100

**Correlation is significant at the 0.01 level (2-tailed); Source; Fieldwork, (2022)

Table 4 : Multiple Linear Regression Analysis and Model Summary

Assumptions of linear regression				Model summary statistics	
Variable	Tolerance	VIF		R	0.795
ATT	0.468	2.137		R squared	0.469
SN	0.384			Adjusted R squared	0.452
BI	0.420	2.383		SE	4.15802

						Durbin Watson	1.783		
						ANOVA summary			
						F (p-value)	27.997(<0.001)		
Model		Unstandardized Coefficients			Stand ardize d Coeff icient s	t	Sig (P).	95.0% Confidence Interval for B	
		B	Std. Error		Beta			Lower Bound	Upper Bound
	ATT	0.520	0.151	0.376	3.442		0.001	0.220	0.821
	BI	0.615	0.181	0.392	3.398		0.001	0.256	0.974
	SN	-0.019	0.120	-0.019	-0.157		0.875	-0.258	-0.220

Source; Fieldwork, 2022

Effect of Attitude (ATT) on Acceptance of Electronic Banking (AEB)

The results in table 4 showed that, a unit increase in attitude (ATT) has 0.3442 (95% CI; 0.220, 0.821) increase in Acceptance of Electronic Banking (AEB) at P=0.001. Since the P value is less than 0.05-value (typically ≤ 0.05) Therefore, Attitude (ATT) has a positive and significant effects on acceptance of electronic banking. The alternative hypothesis which stipulates that attitude significantly influences the acceptance of electronic banking is accepted and the null hypothesis is rejected

Effect of Behavior Intention (BI) on Acceptance of Electronic Banking (AEB)

The results in table 4 indicated that, a unit increase in Behavior Intention (BI) has 3.398 (95% CI; 0.256, 0.974) increase in AEB at P=0.001. Since the P value is less than 0.05-value (typically ≤ 0.05); therefore, Behavior Intention (BI) has a positive and significant effects on acceptance of electronic banking. The alternative hypothesis which stipulates that Behavior intention significantly influences the acceptance of electronic banking is accepted and the null hypothesis which stipulates that Behavior intention does not significantly influences the acceptance of electronic banking is rejected.

Effect of Subjective Norms (SN) on Acceptance of Electronic Banking (AEB)

The results in table 4.2 showed that, a unit increase in Subjective Norms (SN) has- 0.157 (95% CI; -0.258, -0.220) has an increase in Acceptance of electronic banking (AEB) at $P=0.875$. Since the P value is greater than 0.05 value Therefore, Subjective Norms (SN) has a positive and no significant effects on acceptance of electronic banking. The null hypothesis which stipulates that Subjective norms (SN) does not significantly influences the acceptance of electronic banking is accepted and the alternative hypothesis that Subjective norms (SN) significantly influences the acceptance of electronic banking is rejected.

Discussion

The findings have shown that customer's attitude has significant influence on electronic banking on the customers on using electronic banking products and services. These findings have shown that the use of electronic banking can assist in accomplishing task quickly, increase productivity, assist in planning of the customers daily and weekly activities, assist in business transactions and enhance business opportunities(Chille,2018).

The findings conform to the Theory of Reasoned action (TRA) as indicated by Ajzen *et al.*, (1989) which explains the influence of attitude on the use of technology to individuals. However the study has indicated that electronic banking products and services needs better attitude formation by the customers in order to be accepted for use. This is possible to be attained by effective positioning of the electronic banking products to the customers by proper segmentation and hence targeting of the market(Chille et al., (2021).

This study has similar findings as the study done by Effendy et al., (2021) on the effects of perceived usefulness, ease of use and subjective norms on the intention to use electronic wallet in Indonesia. Also the findings are similar with the study done by Lema (2017) in Tanzania; Scchud et al., 2019) in Indonesia which indicated that attitude has an influence on technology use. This indicates that emotions response of customers towards technology has an impact on the use of technology(Janson & Leimeister, 2020). Also similar with the study done by Shanmugam et al., (2014) in Malaysia, which enumerated on how attitude influence the use of mobile banking to the Malaysian individuals. Therefore, more banking institutions and technology developers should strive on making their electronics products and services to be more clearly positioned in the minds of the customers and thus will arouse more demands on the products and services.

[However the study done by Ajax & Irfan](#) (2012) in China and Erawan(2016) in Thialnad indicated that attitude has no influence on use of technology. This can be caused by the cultural differences in different communities, which can include the purchasing behavior and the lifestyles of the community (Wamuyu, 2014). Notwithstanding that most studies in both developed and developing countries have indicated relation between attitude and technology use (Ajzen & Fishbein, 1989; King *et al.*, 2012) Further understanding of the determinants of the attitudes according to Davis and Vekantatesh, (2000) assist any organization in creating and making better products and systems that can increase the acceptance of the new technology.

Attitude in business entails understanding of the market needs, opportunities. These opportunities in business are recognized by some persons and others not (Lyons *et al.*, 2014), attitude can be positive or negative depending on the intrinsic factors and extrinsic factors of an individual (Chen & Skinner, 2014). Effective attitude assists in tapping up the market opportunities, which increases consumers demands on products and thus business growth (Lyons *et al.*,2014).Attitude in utilizing business opportunities have some variations among individuals, due to nature of the market needs, demands patterns, sellers experience in business and psychological background of the seller (Boermans & Willebrands, 2017).Attitude dynamics occurs due to the fact that there are variations in entrepreneurial spirits, as there are persons with high enthusiasm to come up with new products and new solutions in businesses challenges, and there are others who are stagnant with difficulties in decision making regarding the use of technology.

Opportunity identification is an important part in effective attitude in business This will reinforce better business to find new demands from customer's needs and wants, and ultimately find out the capital needed for the business growth, and in the sense looking on the available resources in the market.According to Kotler (2012), demand of the products refers to the amount of products or services needed at the targeted market at a specific period of time. There are various demand patterns in the market. Such that the more the demands of products in the markets, the more the products will be sold by the commercial banks, which will reinforce an increase in the profit margin. Therefore, there is relationship in the types of products sold whether by small business or large in the market, with the needs and wants of the consumers, which create demands, hence

this should be determined by the attitude formation of an individual (Fuertes *et al.*, 2020) However, education which is the knowledge about the products and the market forces both internal and external are important concepts in changing the consumer's attitude.

The findings have indicated that Behavior Intention (BI) has a positive and significant effects on acceptance of electronic banking. The alternative hypothesis which stipulates that Behavior intention significantly influences the acceptance of electronic banking is supported and the null hypothesis which stipulates that Behavior intention does not significantly influences the acceptance of electronic banking is rejected.

These findings are consistent with the Theory of Reasoned Action which was introduced by Fishbein and Ajzen (1980) in predicting an individual intention of using technology. Therefore, these findings are similar with the Theory of Reasoned action (TRA), that Behavior intention is the product of attitude and subjective norms. Such that when an individual has positive attitude on using the electronic banking technology, this will reinforce an individual to have positive subjective norms which will reinforce the behavior intention of an individual to use Technology.

According to Davis *et al.*, (1989) External factors such as design characteristics have the influence on behavior intention. So, there are many design characteristics that surrounds an individual of which the organization needs to undertake thoroughly marketing research on understanding the needs and wants of the customers.

These findings have similar results with the past studies which showed that behavior intention have an influence on the use of the technology in Malaysia, which was done by Shanmugam *et al.*, (2014) regarding the factors that influence Malaysian on the use of mobile banking. Also, the findings are similar with the study done by Chao (2019) in China, which indicated that behavior intention has a positive and significance effects on the use of technology. It has been revealed that customers have positive intention to continue using the electronic banking products provided they have positive attitude towards the products that will reinforce them to use the technology(Shanmugam *et al.*, 2014).

However, the findings have indicated that Subjective Norms (SN) has a positive and no significant effects on acceptance of electronic banking. The null hypothesis which stipulates

that Subjective norms (SN) does not significantly influences the acceptance of electronic banking is supported and the alternative hypothesis that Subjective norms (SN) significantly'. This entails that Subjective norms is not the predicting variable in electronic banking use of products and services.

These findings are in contrary with the past studies which showed that subjective norms have an influence on the use of the technology; these studies were done by (Batti et al., 2018; Nawafleh et al., 2018; Ngo et al., 2017; Sing and Srivastav. 2018). The differences in the findings may be caused by the environmental factors of the past studies taken and the current studies.

However, the findings are in contrary with the Theory of Reasoned action (TRA) which guided this study. Which stipulates that Behavior Intention to use the technology is determined by the attitude, which is the world's outlooks of an individual that can give rise into positive or negative perception) and the subjective norms, which entails on how individuals in assemblage of her or him fellow view certain new technology and influence her or him, which have a positive or negative influence on the behavior intention that spill over the intention to use technology

Conclusion and Recommendations

This study used the three major constructs of TRA which were attitude (ATT) and subjective norms (SN) and Behavior intention (BI). The findings of this study are in support of Theory of reasoned action (TRA) on the effects of Attitude and behavior intention on actual acceptance of technology particularly in electronic banking product and services under this study. However, the findings have indicated that Subjective Norms (SN) has a positive and no significant effects on acceptance of technology specifically electronic banking in commercial banks in Tanzania. Therefore, the study findings have validated the need of attitude and behavior intention from TRA on the use of technology and did not validate the Subjective norms from TRA. Therefore, there is

A need of Commercial banks to understand their customers attitude and intention of using the electronic banking products, by undertaking a thoroughly marketing research, such that they can design the core electronic products and services that conform to the core needs and wants of their customers and the markets needs in general. Furthermore, there is a need of finding out

other factors rather than subjective norms in order to entice more customers on acceptance of electronic banking products and services in Tanzania

Study Implications

The findings of this study have made the theoretical contribution regarding the constructs of TRA which are Attitude and behavior intention have been indicated to be the parsimonious predictor of the electronic banking in the financial institutions of Tanzania. The model under this study can therefore be used in other studies on investigating the factors influencing the acceptance of electronic banking in developing countries, particularly in the African context.

This has indicated that consumers will prefer mobile devices and applications that enhances their business performances in terms of them in accordance with their attitude, and thus reinforce behavior intention and ultimately actual use of electronic banking technology

However, the findings have contributed to the factors that have no influence on electronic banking transactions on the financial institution industry of Tanzania by identifying that subjective norms have no influence on the acceptance of electronic banking on Commercial banks in Tanzania. This imply the need of further studies on the influence of subjective norms on the acceptance of electronic banking on commercial banks in Tanzania

Therefore, financial institution stakeholders and the government should collaborate in improving these policies over time, in ensuring that the attitude and behavior intention of customers are enhanced, by continuous improving of the policies regarding electronic banking products and services., reduction of government levies and tax, this could further contribute to much acceptance of electronic banking products, improve the banking business and improve the economic growth of the nation

Limitations And Areas for Further Studies

There are many factors regarding technology adoption that have not been covered in this study. That being the case, further studies regarding factors influencing the acceptance of electronic banking regarding can be done due to the fact that the current study was conducted in one region only. Since Tanzania has 31 regions, it is likely that the sample may not be the actual representation of the entire population regarding factors influencing the acceptance of electronic banking in Tanzania. Nevertheless, this study was limited to attitude (ATT), Subjective norms

(SN), and Behaviour Intention (BI) only. Further study may include other factors such as perceived usefulness, perceived ease of use, perceived behaviour control, and system characteristics can be in on identifying the factors influencing acceptance of electronic banking in commercial banks of Tanzania

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The Factors Affecting Tax Compliance in The Timber Sector in Makambako District

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Abstract

Tax noncompliance signifies some of the confusing glitches facing many countries including Tanzania, thus why the government formed Tanzania Revenue Authority (TRA) to assess, collect, and account for all central governments' revenue. Apart from all strategies in place, tax non-compliance still exists in some sectors such as timber, and hence causes a shortage of revenue for government expenditure. Therefore, this study assessed the factors affecting tax compliance in the timber sector in the Makambako district. The study uses both quantitative and qualitative research designs, the purposive sampling was employed to obtain 155 respondents. The data collected were analyzed by using descriptive analysis. The findings show that tax non-compliance is caused by various reasons such as negative perception, unfair tax estimation, unfair tax procedures, unfair treatment of taxpayers during timbers transportation and tax collection, lack of tax education, unfair tax laws, and lack of tax knowledge. The presence of the mentioned stimulus leads to tax non-compliance which reflects the loss of government revenue and creates a negative atmosphere in the sector. Therefore, tax education should be given to taxpayers and tax officials, especially law enforcement practices.

Keywords: tax compliance, tax noncompliance, and timber sector

Introduction

The provision of social services and administration of all government matters need fiscal support which comes from revenues collected in a given country. This argument calls upon the necessity of having an effective and efficient system of collecting revenue by reducing all loopholes for any person or cooperate not to pay tax. It is from this view, the notion of tax noncompliance chips in to express the tendency of not paying taxes. Tax noncompliance is a practice in which a person fails either willingly or is unwilling to observe laws, and social, cultural, or institutional requirements (Omary & Pastory, 2022). Normally, tax non-compliance occurs when a person or company fails to comply with the existing tax laws and practices either because of the absence of proper business, business operation, mistreatment, poor perception, and corruption (Mbilingi & Mutalemwa, 2020).

Tax noncompliance is a universal phenomenon that takes place in all societies and economic systems including both developed and developing countries (Chau and Leung, 2009). It includes acts in flouting of the law whereby persons pay a lesser amount of tax than they would otherwise be bound to pay by concealment of all or part of their legitimate or illegal economic activities from the tax authorities (Ian and Veerinderjeet, 1995 as cited in Mekonnen, 2016). To overcome these challenges the government formulated The Tanzan Revenue Authority (TRA) by Act of parliament No 11 of 1995 and started its operations in 1996.

The authority is responsible for impartially administering various taxes of the central government, and managing the assessment, collection, and accounting of all central government revenue. The Government has decided to take strong measures to improve domestic revenue collection, including broadening the tax base, increasing efficiency in revenue collection and identification of new taxpayers; and undertaking measures to increase revenue collection. Among the Measures taken includes changing tax rates such as VAT and PAYE, forming

several task forces to study ways to combat tax evasion, introducing electronic filing of VAT returns, and The ASSYCUDA +++ on import taxes and electronic fiscal devices (Stephen, 2014).

Tax compliance is operationally considered as obeying tax laws in the act of true reporting of the tax base, correct computation of the tax liabilities, timely filing of tax returns, and timely payment of the amount due as tax (Chatopadhyay and DasGupta, 2002; Franzoni, 2000: cited in Mekonnen, 2016). Therefore, any act done by the taxpayer conflicting with the previous statement is non-compliant. Noncompliance with tax laws can be viewed in different practices such as intentional noncompliance in which the taxpayer purposely does not observe the tax rules and regulations for individual benefits. The second is unintentional non-compliance which can be caused by a lack of tax awareness, and errors in applying tax laws. Any noncompliance act committed by the taxpayer that results in non-declaration / underreporting/ of taxable income leading to non- 11 payment or underpayment of tax is directly affecting the revenue collection (Alabed et al., 2011).

The revenue of the government has been greatly affected by the current tax system with loopholes to corrupt tax officials, the lack of adequate data, and many more that have worsened the situation. Combat Tax noncompliance requires understanding the factors influencing taxpayers' decisions on whether to pay or evade taxes. Understanding these factors will help the government formulate policies and assess them (Stephen, 2014).

Statement of the Problem

Tax noncompliance signifies some of the confusing glitches facing the Tanzanian economy, nevertheless, Tanzania formed Tanzania Revenue Authority (TRA) as the government agency charged with the assessment, collection, and accounting of all central governments (Asada, 2010). As taxation is one of the means of revenue generation for any government to meet the need of its citizens, the loss of revenue causes serious damage to the proper performance of the public sector, threatening its ability to finance public expenditure (Abiola & Asiweh, 2012; Chiumya, 2006). The revenue of the Tanzania government has been greatly affected by the current tax system giving loopholes to corrupt tax officials, the lack of adequate data, and many more have worsened the situation (Stephen, 2014). This loss is also seen in Ojwang and Shau (2021) that there is a tendency for SMEs to disclose inappropriate information to tax officials leading to a loss of revenue for the government. There are several factors leading to tax noncompliance such as taxpayers, economic, and institutional factors of which the government loses a lot of revenue (Omary & Pastory, 2022). To the best of our knowledge, the causes of tax noncompliance in the timber sector in the Makambako district have not yet been studied. Therefore, this study is going to analyze what are the causes of tax non-compliance in the timber subsector in the Makambako district.

Research Objective

The general objective of this research is to assess the factors affecting tax compliance in the timber sector in the Makambako district by concentrating on:

- a) To explore perception toward tax compliance in the timber sector in the Makambako district
- b) To examine tax procedures in the timber sector in the Makambako district
- c) To assess reasons for tax non-compliance in the timber sector in the Makambako district

Literature

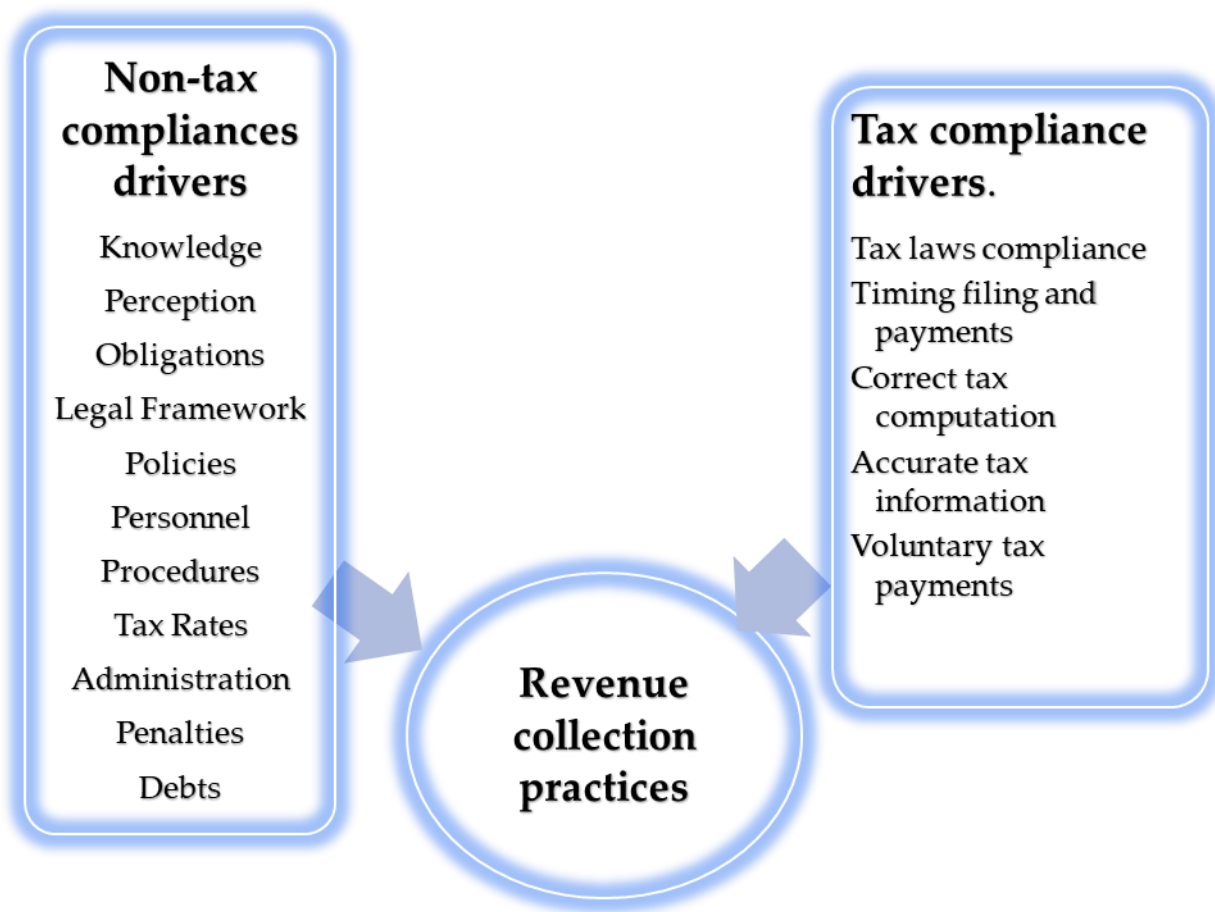
Theoretical Review

Tax compliance theories; during the 1980s, (Jackson, B, and Milliron, (1986) developed economic theory and utility theory to explain the widespread tax gap, assuming taxpayers to be utility maximizers in the decision of tax reporting and compliance. Tax evasion was thought to be worthwhile because it affects individual financial gain versus cost

Recent tax compliance studies have relied on psychological and social theories. Furthermore, the studies contended that human behaviors play an important role in individual taxpayer compliance when making decisions. However, different literature lacks agreement on penalties for non-compliance, as well as why people pay or do not pay their taxes(Devos, 2014). Tax equity and deterrence measures must be improved for the tax compliance process. The tax deterrence model took into account a variety of factors, including the complexity of the tax system, the level of revenue information services, withholding and information reporting, preparation of responsibilities and penalties, the likelihood of receiving services, and tax rates (Devos, 2014).

Conceptual framework

The study aimed at the assessment factors affecting tax compliance in the timber sector in the Makambako district and suggest suitable guidelines for improving tax compliance in the timber sector. The timber sector is one of the major sectors with unsystematic activities and is almost done in remote areas whereby revenue collection offices are far located. Those products originating from timber need to pay tax according to the law. Timber products mean any wood product, including, but not limited to, finished lumber, rough-cut lumber, cants, logs, wood chips, sawdust, and wood waste. Therefore, to improve tax collection revenue and practices, the following factors must be considered as shown in the conceptual framework below.



Source: Researchers (2022)

Empirical Review

Non-compliance chances can affect taxpayer compliance directly through income level, income source, occupation, perceptions, and perceptions (Chau and Leung, 2009). According to Andreoni et al. (1998) as cited in Mekonnen, 2016) that as income increases, tax compliance decrease. This assertion has been stressed by Houston and Tran (2001) that the respondents in the lower-income group tend to have a lower proportion of tax compliance by under-reporting income and by over-claiming expenses than their counterparts in the higher-income group.

Law abidance Tyler (1990) argues that citizens may comply with the law because they view the legal authority as having a legitimate right to dictate their behavior. He added that an individual's behavior can be affected by personal ethics, the fear of punishment, and the fear of friends' condemnation. For the majority, however, a tendency to obey the law must be a significant factor in determining their view on whether to comply with any law including those in the domain of public law such as tax compliance (Marta, and John, 2002 in Mekonnen, 2016). The presence of tax penalties serves a great role to force the majority to be in placing sanctions and prohibited tax noncompliance.

Studies show that the chance of tax noncompliance comes greater when the cost and benefit analysis favors individuals by minimizing their tax obligation by deliberately underreporting their income (Ojwang' and Shau, 2021). They argued that the less information is given to the tax authorities the greater save is made, of which the majority of SMEs in Tanzania are not willing to document their financial matters because of taxation procedures.

According to Chau and Leung (2009), the two major considerations for altering taxpayers' perceptions and perceptions of tax compliance are the fairness of the tax system and peer influence. Accordingly, an individual's assessment of the fairness of the tax system determines the readiness or resistance to the process. This argument is given much emphasis by Alabede et al. (2011) that positive and negative evaluation is the main dominant characteristic of an individual's perception. This is also supported by Kirchler et al. (2008) who recommended that 18 taxpayer who has a satisfactory perception toward tax evasion are anticipated to be less compliant and equally taxpayer with a negative perception are likely to be more compliant. For having a fairground, the contrasts should be made based on individuals, groups, and societal levels at the individual level; taxpayers will be interested in the fairness of their tax burden, if it is perceived to be too high compared to other individuals' tax burden, his rate of compliance is likely to decrease. At the group level, the taxpayers are interested in the fairness of treating their groups compare to other groups, when a group perceived that it is not fairly treated concerning the tax burden may lead to tax noncompliance in the group (Alabede et al, 2011).

It is widely acknowledged that the extent of tax compliance in many developing countries has been decreasing over time. The underdeveloped 19 tax system/structure is one of the major causes for this decreasing trend. In the Fischer Model, the effectiveness of the tax system is affected by the complexity of the tax system, penalties and tax rates, and the probability of detection or catching (Chau and Leung, 2009). Some studies suggest that high tax rates increase the tax burden and, hence, lower the disposable income of the taxpayer (Allingham and Sandmo, 1972; Chipeta, 2002). Although this is not one reason, for example, the tax rate on corporate profits is relatively low, individuals are facing a high tax rate, they may perceive their tax as unfair and choose to declare only a part of their income. Similarly, large companies can often more easily take advantage of tax loopholes such as grace period, while individuals do not have that privilege then the system is not fair.

Inadequate skills to detect inappropriate tax practice is among the great reason for most SMEs not paying tax. This can be supported by the presence of weak legal frameworks to enforce the predetermined procedures that influence tax payments in the country. In most developing countries as the majority are striving for their existence, the gap is huge between taxpayers and authorities. For example, the size and nature of penalties that are incurred after evasion has been detected are correctly connected to the level of tax compliance (Stanely, 2014)

The Taxpayer Compliance Measurement program data consist of line-by-line information about what the taxpayer reported and what the examiner concluded was correct. The primary purpose of the TCMP was to improve the process of selecting returns for operational audits. Rather than estimating the tax gap Measuring a behavior that individuals attempt to hide is inherently one of the more challenging problems faced by social scientists (Mekonnen, 2016). According to Andreoni, Erard, and Feinstein (1998, p.836) as cited in Mekonnen (2016) suggest that the most dependable information about noncompliance is based on actual tax return information that has been thoroughly examined by auditors as part of the IRS Taxpayer Compliance Measurement program (TCMP) which attempts to measure "unreported income" and the national "tax gap". Any "excess" in currency demand, or the amount unexplained by the explanatory variables, is then attributed to the shadow economy and, by extension, the amount of tax evasion (Mekonnen, 2016).

Studies show explicitly that evasion drops with age, and is more common among men, married individuals, occupations, car dealers, stores, and restaurants (Clotfelter, 1983; Feinstein, 1991; Andreoni et al., 1998 in Mekonnen, 2016). Tax evasion concern is predominantly in developing

countries catalyzed by the rapid growth of investment and inexperienced personnel dealing with taxation. In Tanzania, one of the important areas where tax evasion has been reported to be a severe problem is customs duties. Tsikata (1999) finds large discrepancies for Tanzania between revenue as simplified by the published tariff and the estimated import volumes versus actual receipts. The differences are explained by a combination of exemptions, corruption, smuggling across official entry points (ports and roads), and smuggling across unofficial entry points (unguarded borders). The study conducted by Stephen (2014) revealed that 74% of the respondents indicated that a lack of accountability in the public sector influences tax evasion and a high tax rate influences tax evasion by 51%.

Methodology

Research Design and Approach

Both quantitative and qualitative research designs were used due to the nature of the study (Hannabuss, 1995; Prabhakara, 2016). A qualitative approach was used to explain procedures used in tax collection and compliance challenges in the timber subsector in the Makambako district. Quantitative data was used to examine the factors affecting tax compliance in the Makambako district.

Sampling Procedures

The study was conducted in the Makambako district which is a market center for the timbers business. The purposive sampling technique was used to identify 5 timber sellers and 5 transporters for the interview. Then questionnaires were provided to 150 respondents selected purposively because of their experience in the timber sector, where 5 district officials, 5 TRA officials, 70 farmers, and 70 buyers.

Methods of Data Collection

Interviews and focus group discussions were used to gather qualitative data. The interviews were designed to be casual conversations centered on the identified themes. The interview lasted 15 to 25 minutes. Questionnaires were given to collect quantitative data.

Data Analysis

Qualitative data were analyzed by content analysis, while quantitative was analyzed by descriptive statistics to explain the relationship between identified variables. The use of descriptive analysis provides a great atmosphere for explaining the phenomenon (Doyle, 2022).

Results And Findings

This study consumed data from 160 respondents, where 106 (66%) were men and women were 54 (34%). Regarding education background, 89 (56%) finished secondary education, 42 (26%) finished college education, and 29 (18%) finished primary education. Age background 122 (76%) were below 40, and 38 (24%) were above 40 years.

Perceptions Toward Tax Compliance in the Timber Sector in Makambako District

This study viewed perception as a judgmental evaluation caused by a particular stimulus to which a positive or negative impact can be observed. The data from the interview and group discussion show that majority of individuals in the timber industry are not willing to pay taxes because of a negative perception toward tax compliance. There are several reasons which cause tax non-compliance perceptions as shown in table 1 shows.

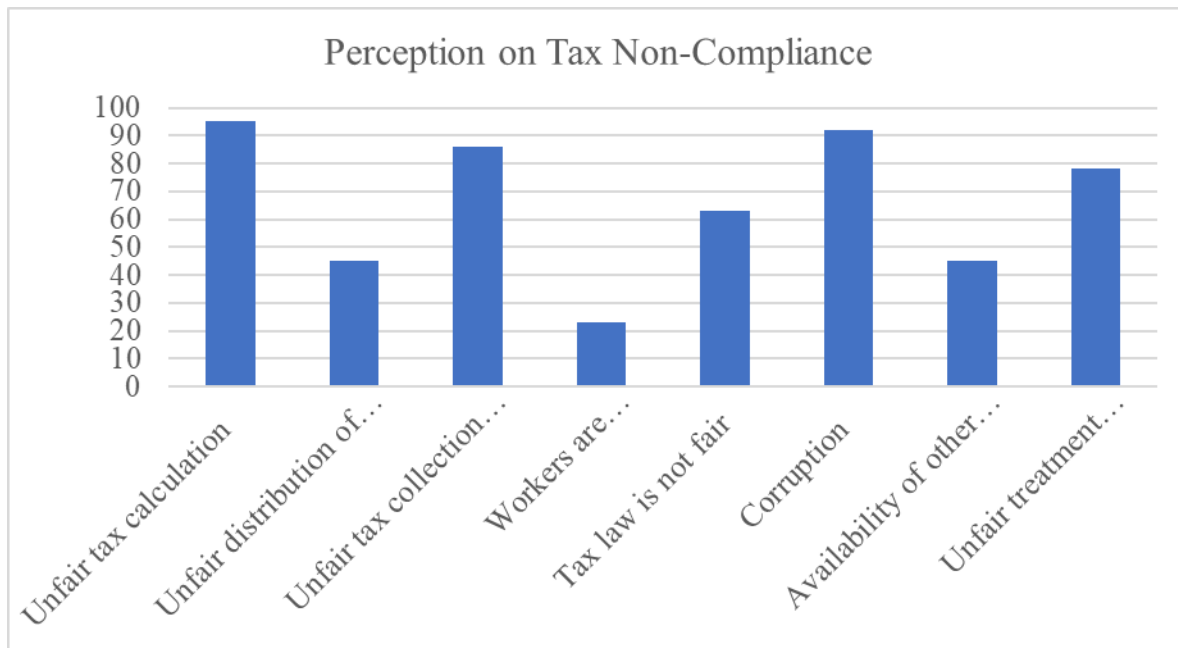


Table 1; *Perceptions Toward Tax Non-Compliance, 2022*

Unfair tax calculation got the highest frequencies as the reason for having the perception of tax non-compliance. The suggestions from respondents show that there is unfair estimation done by tax officials either intentionally or unconsciously because they depend upon information given by the taxpayer. Findings suggest that some taxpayers fail to give current information because of various reasons such as being new in the business, lack of education, afraid tax officials, and sometimes intentionally reducing the tax burden. When the taxpayer is new in a business, there is a possibility of not knowing the actual situation and hence using intentions and says. This situation leads to either over or under-tax estimation and hence installs fear and negative perception toward tax compliance. The perception of tax noncompliance affects government revenue as the majority will not feel to have the responsibility to pay tax and for which they will look for other means to avoid tax collection (Alabede et al, 2011).

Corruption has been identified as the factor triggering perception toward tax non-compliance. Corruption is the use of public or private properties, authorities, or power for individual gain. Data show that most of the officials are corrupt and sometimes they use any means to install fear in the taxpayers until they get something. The presence of corruption is triggered by the lack of education especially on tax law, procedures, irregularities, and the rights of the taxpayers. Corruption not only causes a perception of tax non-compliance but also reduce government revenue and the growth of businesses especially startup (Masanja, 2019).

Unfair tax collection procedures are another reason leading to the perception of tax non-compliance. Data show that the complex and long procedures for being identified, recognized and payments of returns are not fair. The tax law has given the power to tax officials to determine tax and other penalties and set a range to be paid, while the taxpayers are not given room to discuss or suggest. When the tax collection procedures are not well known to the taxpayers and are being used inappropriately demoralizes, discourages, and distorts the whole tax collection system (Kiunsi, 2021).

Unfair treatment during timbers transportation is among the factors which cause negative perceptions toward tax compliance. Most of the timbers from the Makambako district are not

used in the area of production, they have to be transported to various parts of the country. Unfair treatment during the transportation is caused by the presence of many government officials who are not loyal. This situation forces the majority of timber transporters to provide wrong information, especially the number of timbers taken to reduce district levy, and then that amount to be a cover bribe to the tax and other officials along the road. Unfair treatment affects government revenue and causes a negative perception of tax compliance (Devos, 2014).

Tax laws and bylaws are not fair and tax non-compliance is cultivated. Tax laws and bylaws are not well understood and well interpreted because they seem to be protecting one side. The respondents explained that on some occasions the tax officials do not give room for negotiation and even if given the bribe should be given. Tax laws when not implemented fairly they subject both parties to engage in corruption to reduce the burden (Regulations, 2020).

Tax Procedures in the Timber Sector in Makambako District

According to the group discussion and desk review, there are several tax procedures to be undertaken to make a business in the timber industry. The presence of many procedures subjects taxpayers to difficulties such as discouragement, bankruptcy, corruption, and government revenue losses. Tax Identification Number (TIN) has been mentioned as the first procedure for a person to become a timber trader. This procedure has many requirements such as a letter from local authorities, having a formal address, two passports, sales estimations, a national identity card, and other incomes. The data suggest that having many requirements before starting a business discourages and subjects them to searching for alternatives such as bribes to shorten the process. This situation leads to corruption, loss of government revenue, and a discouraging environment for startup businesses and it is reflecting the findings from other research made by (Masanja, 2019).

Permits from forest resource board and transport permit. These permits are to be paid before the commencing of the business and hence increase the burden on the starting businesses. This situation leads the majority of beginners to fail in their early stages or uses permits from existing businessmen by paying them a little amount of money. Therefore, some taxpayers decide not to continue with the mentioned procedures and find another way around such as the use of permits and other documents from others. This situation reduces the government revenue because the estimate will be the same while the practice on the ground is different. Furthermore, the existence of more than one governmental organ involved make the procedure more complex. This finding is supported by the studies conducted in Tanzania that the tax non-compliance is accelerated by the difficulties in the processes to commerce the business (Kiunsi, 2021; Masanja, 2019).

Tax estimation, it has been observed that tax estimation for timber traders is not fair. However, tax estimation is expected to observe the tax fairness model (equity), but on the ground, things are not working in that way. The respondents explained that to reduce the burden they give wrong information by reducing the capital invested, tax officials do not have enough information about the business at hand or fail to reach the business point and hence depend on the information given by taxpayers. This sometimes may lead to overestimation or underestimation resulting in tax non-compliance (Ojwang & Shau, 2021).

Tax clearance is another difficult procedure as it is given after paying taxes for the first quarter. This situation discourages the majority of beginners and opts to use the documents of the existing businessmen by paying them some amount and hence the government loses revenue.

The procedures are too expensive and seem not fair and hence the tax burden may lead to tax noncompliance in the group (Alabede et al, 2011).

Business license from the district which is paid. The process of getting a business license from a district is challenging as it needs other procedures to be accomplished first and hence financial implications are observed. Business licenses are said to increase the burden on taxpayers and discourage them. District levy is another procedure that leads to tax non-compliance. The respondents explained that the levy paid is per piece of timber. This means the more timber the more levy paid. This situation makes the majority hide the actual number of timbers harvested or transported. The wrong information is a major challenge to the tax fairness model and it leads to the loose of government revenue (Ojwang & Shau, 2021).

Reasons for Tax Non-Compliance in the Timber Sector in Makambako District

Data from group discussion mentioned 11 eleven factors to tax non-compliance as shown in figure 1

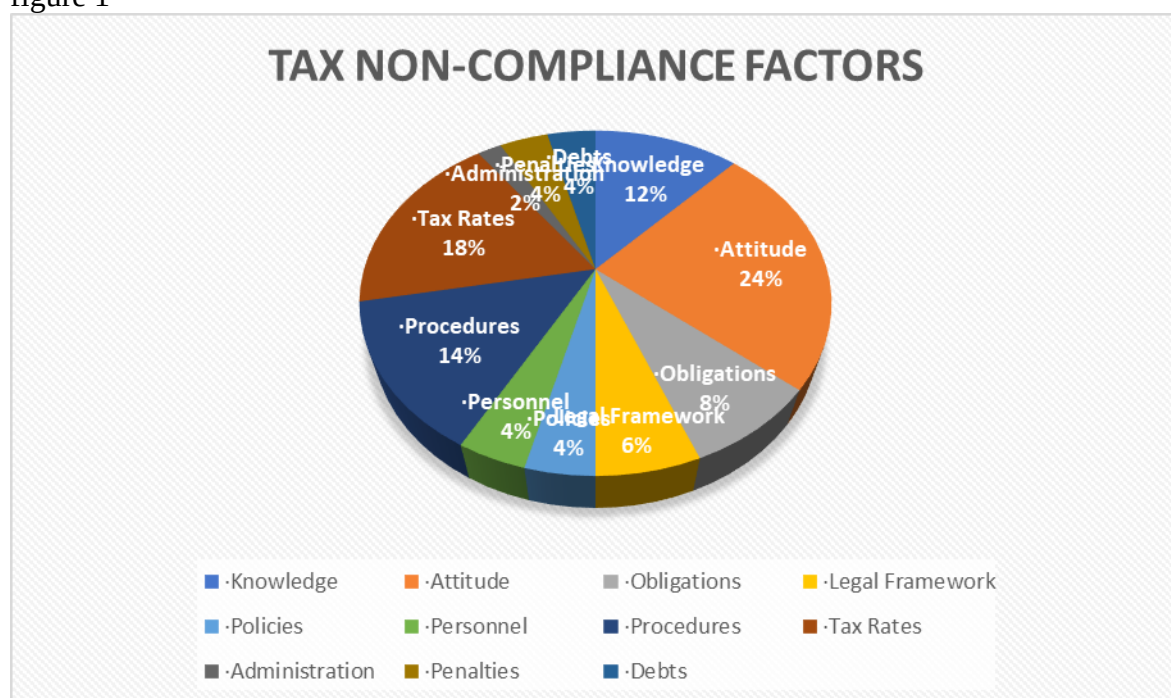


Figure 1; *Tax Non-Compliance Factors in Timber Sector in Makambako District, 2022*

Perception has the highest frequency of being a factor for tax non-compliance. Perception is a judgmental evaluation of a certain stimulus that may cause either a positive or negative impact. Data suggest the presence of tax non-compliance in the timber industry because of numerous factors which trigger negative perceptions toward tax compliance such as unfair tax estimation, unfair tax procedures, unfair treatment by tax officials, corruption, and tax laws. Perception provides an individual with recognition, affection, and behavioral determination toward the stimulus in question (Haddock & Maio, 2008). Therefore, the presence of stimulus toward tax non-compliance provides room for an individual to opt for it.

Tax rates are the second reason why there is tax non-compliance in the timber industry in the Makambako district. Data show that there are many challenges associated with tax rates or estimations as it depends on the view of tax official who is not conversant with what happening on the ground. This results in the absence of tax equity and hence leads to either a tax burden to

taxpayers or a loss of government revenue by underestimation. Due to the tax burden, the wrong information is given to tax officials (Masanja, 2019; Ojwang & Shau, 2021).

Tax procedures are the reasons for tax non-compliance in the timber industry. Data show that the tax procedures are complex and long and taxpayers have to use bribes to shorten and smooth the processes. It has been observed that there are so many challenges patterning to tax procedures that may be caused by incompetent tax officials, tax laws, or knowledge of the taxpayers. When the tax procedures are complex, long, and discouraging taxpayers, it reduces the economic development and national revenue because of corruption, poor investment atmosphere, and low tax base (Kiunsi, 2021; Regulations, 2020).

Tax knowledge is another factor causing tax compliance in the timber industry. Technical know-how is the engine of any business, the lack of tax knowledge in the timber industry reduces government revenues. It has been explained that there is not enough knowledge for the taxpayers and even the available resources are not written in the language of laymen. Tax education is the power for effective tax collection and reducing complaints and difficulties (Masanja, 2019).

Chapter Five

Conclusion and Recommendation

This study aimed at assessing the factor affecting tax compliance in the timber sector in the Makambako district by concentrating on exploring the perceptions toward tax compliance, examining tax procedures, and assessing reasons for tax non-compliance in the timber sector in the Makambako district. The data obtained and analyzed suggest that there is tax non-compliance in the timber sector in the Makambako district.

Data suggest that negative perception toward tax compliance has affected much tax collection in the district as taxpayers face many challenges which discourage and demoralize. Among the stimulus for that negative perception is the presence of unfair tax estimation, unfair tax procedures, corruption, and unfair distribution of tax collection. As the study viewed perception as judgment evaluation caused by a particular stimulus, the mentioned reasons provide taxpayers with a conclusion of which tax non-compliance and business failure are overt.

The timber industry is faced with complex and long procedures which hinder the development of the sector. It has been observed that there are many procedures to undertake before starting the business of all the money is a ticket, so the burden of tax is felt even before any revenue generation. Procedures such as Tax Identification Number (TIN), permits, business licenses, and tax clearance are a hindrance to smooth business practice and hence provide room for corruption and tax non-compliance practices.

Lastly, the reasons for tax non-compliance in the timber industry in Makambako district include negative toward tax collection, lack of tax knowledge, tax rates (estimation), and procedures. The data suggest that the tax office has been given a big room to decide the fortune of the taxpayer of which sometimes they are victimized. The lack of tax knowledge reduces room for the taxpayers on negotiating and utilization of their tax rights in the whole process and hence leads to tax non-compliance.

The study recommends that tax knowledge be given to timber traders to minimize negative perceptions toward tax compliance. The tax procedures and levies should minimize at least having a single document that stands for all requirements. Furthermore, research should be conducted on the appropriate approaches for the provision of tax education.

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The Determinants of Mobile Commerce Acceptance among youth in the Telecommunication industry of Tanzania.

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Abstract

The study aimed to identify the determinants of mobile commerce acceptance among youth in the telecommunication industry in Tanzania. The study's specific objectives were to assess the attitude toward the acceptance of mobile commerce among youth, to identify subjective norms on the acceptance of mobile commerce among youth, and to identify the perceived behaviors that control the acceptance of mobile commerce among youth. The study used two theories: the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB). The study was undertaken at Tigo Tanzania PLC Limited. The study used a survey strategy for the collection of data. Both primary and secondary data were employed. The targeted group provided a sample of 300 respondents in Dar es Salaam. Multivariate analysis was used in the study, which included descriptive statistical analysis, Pearson correlation, and multiple linear regression statistical analysis. The study's findings revealed that perceived behavior control (PBC) has a substantial positive impact on youth acceptance of mobile commerce. However, attitude (ATT) and subjective norms (SN) had no significant effect on youth acceptance of mobile commerce. This study has indicated the theoretical implications in the telecommunication sector in Tanzania that the telecommunication sector should consider youth customer needs in terms of understanding their perceived behavior control to enhance acceptance of telecom products and services. Nevertheless, it is highly recommended for Tigo and other telecom companies in Tanzania to reduce the cost of products and services.

Keywords

M-Commerce, Mobile Commerce, Theory of Reasoned Action, Theory of Planned Behaviour

Introduction.

Mobile commerce is defined as the willingness or ability to purchase goods or services from anywhere without involving the traditional channel of distribution through a wireless Internet-enabled device like a cellular or mobile phone (Matola, 2018). It can also be defined as the situation of using mobile technology to sell or buy items; access business information; conduct a transaction; or perform supply chain or demand chain functions. By using mobile devices such as mobile phones, Personal Digital Assistants (PDAs), iPads, and tablets, we facilitate the usefulness of M-commerce (Chille et al. 2021). Mobile phones are one of the most commonly used tools of Information and Communication Technology (ICT) worldwide and are thus recognized as an effective and efficient tool used for multiple purposes (Susanto, 2018). Nowadays, mobile phones are not only used for sending text messages or calling, but they are also used for other facilities such as web browsing, point of purchase, and selling through mobile devices (Chille et al. 2021). Electronic commerce includes activities like business-to-business trade and internal business processes used by organizations to support their hiring, selling, and purchasing of a certain good or service (Mente, 2020).

The world's largest mobile-commerce market, China, is anticipated to increase by 17.2% in 2021, as customers progressively transition from offline to online (Korea, 2020). In this context, the value of m-commerce is predicted to expand at an 11.6% CAGR between 2021 and 2025, reaching 21.4 trillion (US\$3.3 trillion) in 2025. (M. Ertz and colleagues 2021). Much research has been undertaken on mobile commerce acceptability, especially among consumers and marketers at the individual level, as a result of the exponential rise of mobile telephony throughout the world, but few studies have been conducted on youth acceptance of mobile commerce (Li et al. 2018).

According to studies, some African countries have a high level of acceptance of mobile commerce (Pankomera et al. 2019). By 2020, mobile commerce will have dominated online retail in Africa. South Africa has the highest market share of the selected countries, accounting for 63% of total m-commerce (Okonkwo et al. 2019). Morocco and Nigeria followed, each with more than 50% acceptance of mobile commerce. In Africa (Varrella, 2020), South Africa and Morocco had the highest number of Business to Business (B2B) online marketplaces for physical goods in Africa (Varrella, 2020).

Tanzania is the location. Youth, like any other developing country, is a very promising segment in mobile commerce. Tanzania's youth population is above 50%, and the usage of mobile phones is rising, creating chances for a range of socioeconomic activities, according to the 2012

National Bureau of Statistics census (NBS; 2012). According to a December 2021 report from the Tanzania Communication and Regulatory Authority (TCRA), only mobile money transfer is authorized, however mobile devices can be used for other commercial activities, accounting for 54.1 subscribers out of a total of 54.1 subscriptions (TCRA, 2021).

According to the same report, the number of people using mobile money transfers has risen to 35.2 million. This could imply that there is a greater potential for Tanzanian consumers to use mobile devices, particularly mobile phone products. However, according to Chille et al.'s (2021) study on mobile phone acceptance, few consumers use mobile devices for business transactions in addition to social activities. It can also be defined as using mobile technology for supply chain or demand chain tasks, conducting transactions, selling or buying goods, accessing company information and according to Chille et al. (2021), many e-commerce activities are still not carried out.

Furthermore, despite the observed contribution to marketing and financial transaction payment, few youths in larger cities and Tanzania as a whole use mobile phones for various purposes, such as communication and knowledge sharing, marketing, and online businesses, and making payments for various transactions (Chille et al. 2021). Other studies have revealed that, because there is a positive influence on the acceptance of mobile commerce, Mobile platform and application developers must create products that are simple to use from the standpoint of consumers and that are simple to comprehend based on the benefits they provide to users. (Chille et al. 2021).

This demonstrates that there is positive mobile commerce acceptance in Tanzania, but youth involvement and current m-commerce acceptance are insufficiently available in the country (Chille et al. 2021). Despite the government's extensive involvement in promoting mobile acceptance for business transactions, there are few studies in Tanzania that explain mobile commerce acceptance among youth (Nkata et al. 2021). As a result, policymakers, mobile phone product developers, and other stakeholders, including youth, may face constraints in determining how to better use mobile phones to accelerate income generation through improved mobile commerce in Tanzania.

The Theory of Reasoned Action (TRA) and Theory of Planned Behaviors (TPB) will be used in this study to assess how the theories can be used to explain the determinants of mobile commerce (M-commerce) acceptance among Tanzanian youth in terms of attitude toward the behaviors, subjective norms, and perceived behavior control.

Literature Review and Hypothesis

Effects of Attitude towards Mobile commerce Acceptance

The intention to utilize technology is considerably and positively connected with attitude, which suggests that attitude plays a key role in the intention to adopt technology (Hussein et al., 2016). Studies conducted in the past in Vietnam have shown that acceptability of mobile commerce in Vietnamese small and medium-sized businesses is heavily influenced by factors such as attitude toward uncertainty avoidance, user experience, and perceived ease of use. While Chaua and Denga (2018) demonstrate that customer intention to embrace mobile commerce on a smartphone was mostly unaffected by attitude toward using a smartphone, Nabot, Omar, and Almousa's (2020) study did quite the opposite. Consequently, this study has put forward the following hypothesis on the factors that influence mobile commerce among young people in Tanzania's telecommunications industry:

H1: *Attitude has a significant and positive effect on Youth's acceptance of mobile commerce in the telecommunication industry*

Effects of Subjective Norms on Mobile commerce acceptance

A substantial predictor of the desire to utilize mobile commerce is built by subjective norms, and this is one of the elements that might influence or not influence technological acceptance. The study conducted by Saengchaia et al. (2019) revealed that subjective norms had a significant impact on consumers' intentions to accept mobile commerce; in contrast, a study conducted in Yemen by Mutahar1 et al. (2017) revealed that subjective norms had no impact on consumers' acceptance of mobile banking. Consequently, this study has put forward the following hypothesis on the factors that influence mobile commerce among young people in Tanzania's telecommunications industry:

H2: *Subjective norms has a significant and positive effect on Youth's acceptance of mobile commerce in the telecommunication industry*

Effect of Perceived behavior control on Mobile commerce acceptance: -

According to several studies, perceived behavior control significantly affects how well mobile commerce (M-commerce) is received. One of the industries in India that is growing the quickest is e-commerce (Trivedi et.,al 2014). According to several research, Generation Y is the largest demographic of mobile users. Researchers are looking into the elements that might make M Commerce a huge success with Generation Y. Research demonstrates that behavioral intentions—without attitude mediation—are significant predictors of actual behavior (Trivedi et.,al 2014). As a result, the following is the hypothesis that this study has put out on the factors that influence mobile commerce among young people in Tanzania's telecommunications industry:

H3: *Perceived behavior control has a significant and positive effect on Youth's acceptance of mobile commerce in the telecommunication industry*

Methodology

The study included primary data from Youth Tigo subscribers from Kinondoni Municipality in Dar es Salaam, as well as Tigo employees. The location was chosen because of the potential, and Tigo (T) Limited is a big Telecommunication with a high market share of 24.7 equal to 13.3 million consumers for that instance was extremely simple to obtain effective and efficient fresh data and written report about the research (TCRA. 2021). All 300 questionnaires were successfully returned, the questionnaire collected respondents' characteristics, Acceptance of Mobile commerce, Attitude (ATT), Subjective norms (SN), and Perceived control behaviour (PBC). The target population of the study involved customers on which the sampling frame included Youths Customers, youth specialists, youth managers, upwelling/Selling specialists, Churn/RGS specialists, Data managers, Data products specialists, Data CVM specialists, and customer experience design. Both simple random sampling and Purposive sampling in a selection of respondents who are mobile phone users. The data from the field survey were coded, summarized, and calculated using software such as the Statistical Package for Social Science (SPSS) version 20 and Analysis of Variance (ANOVA). Quantitative data were presented in frequency and percentage tables, pie charts, and bar charts. On the other hand, qualitative data were descriptively evaluated using thematic analysis.

Results

Respondent Characteristics

The study's sample included employees of the telecoms company Tigo who were experts in Youth products as well as Tigo's Youth customers. Youth Tigo customers make up 287 (96%) of the respondents, while Tigo employees make up 13 (4%) of the respondents, including Mass and Youth Specialists, Upwelling/Selling Specialists, Youth Product Managers, Churn/RGS Specialists, Data Product Specialists, Data CVM Specialists, and Customer Experience Design. In this study, the gender of the respondents was analysed since gender influences technology adoption. Of the 300 participants who answered the questionnaires, 180 (60%) were men and 120(40%) were males.

Reliability Test.

The alpha coefficient was used to determine the study's reliability. Coefficient Alpha varied from 0 to 1, with 0 indicating no reliability and 1 indicating total reliability. The reliability results of Cranach's Alpha show units of values in different units, from AA, SN, and PBC but all variables show reliable results. Cronbach's alpha varied from 0.905 to 0.921, according to reliability findings. All the scores were higher than the threshold value of 0.7, proving the reliability of the questionnaire. Results for dependability are shown in Table 4.2.1.

Table 4.2.1 Reliability statistics.

Reliability Statistics

	Reliability	
Items	Cronbach's Alpha	Results
Attitude (AA)	0.908	Reliable
Subjective norms (SN)	0.897	Reliable
Perceived behavior control (PBC)	0.906	Reliable
Mobile Commerce Acceptance (MC)	0.915	Reliable

The validity of the study decides whether it measures what it was intended to measure or how accurate the research results are. The results from this study were genuine since the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was greater than (0.764) than (0.5).

Table 4.2.2 KMO and bartletts test.**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.764
Bartlett's Test of Sphericity	Approx. Chi-Square	177.066
	Df	3
	Sig.	.000

Correlation Analysis

Correlation analysis indicated the direction, strength, and significance of the bivariate relationships among all the variables that were measured on an interval scale. The value of a fall between 0.00 and 1.00, in which there was no correlation, denotes no linear correlation. correlations ranging from (± 0.91 to ± 1.00) Very Strong association, (± 0.71 to ± 0.90) High association, (± 0.41 to ± 0.70) moderate, (± 0.21 to ± 0.40) Small but definite relationship and (± 0.00 to ± 0.20) Slight, almost negligible. The correlation in Table 3 indicates that the correlation between independent variables and dependent variables ranges from $r = 0.622$ to $r = 0.707$ at $P = 0.000$. This demonstrates that all independent factors have a strong association with Mobile Commerce (MC) Acceptance in the Tanzania telecommunications market.

Table 4.2.3 Correlation

		AA	SN	PBC	MCA
AA	Pearson Correlation	1	.801**	.812**	.622**
	Sig. (2-tailed)		.000	.000	.000
	N	300	300	300	300
SN	Pearson Correlation	.801**	1	.796**	.635**
	Sig. (2-tailed)	.000		.000	.000
	N	300	300	300	300
PBC	Pearson Correlation	.812**	.796**	1	.707**
	Sig. (2-tailed)	.000	.000		.000
	N	300	300	300	300

MCA	Pearson Correlation	.622**	.635**	.707**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	300	300	300	300

** . Correlation is significant at the 0.01 level (2-tailed). **Source:**Analysis of survey data, 2022

Multiple Linear Regression Analysis

Multiple regression analysis was used to examine the quantitative data from the study and determine if the independent factors (Attitude towards acceptance, Subjective norms, and Perceived behavior control) had an impact on the dependent variable (Mobile commerce). The information was consistent with the conclusions drawn from the three independent variables (Attitude toward Acceptance, Subjective Norms, and Perceived Behavior Control), which account for the variation in the dependent variable; Acceptance of Mobile Commerce. This analysis of variance (ANOVA table above shows the value of F value 26.904 and it is statistically significant at .000.

The R square tells how much of the variance in the independent variables is explained by the model. From the table coefficient of correlation, R is .718 which is a strong positive correlation. The adjusted R square value provides a better estimate of the true population value.

Table 4.2.4 Co- efficient

Co-efficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	.579	.339		.092
	AA	.070	.168	.064	.677
	SN	.184	.160	.169	.253
	PBC	.588	.170	.521	.001

Source; Analysis of data, 2022

Attitude towards on Mobile Acceptance.

The findings from Table 4.5.3 indicated that Attitude towards on the Acceptance was found to have no significant influence on Mobile Commerce Acceptance among youth since its p-value (0.677) exceeded (0.005) of alpha value.

Subjective Norms.

Table 4.5.3 above shows that the independent variable; Subjective Norms has an insignificant influence on the dependent variable; Mobile Commerce Acceptance among youth. It has contributed by (0.235) which is above the (0,005) alpha value.

Perceived Behavior Control.

The Findings in table 4.5.3 above indicated that Perceived Behavior Control has a positive and significant influence on Mobile Commerce Acceptance among youth because its p-value, 0.000, is less than 0.05 (alpha value) This shows the positive influence of perceived behavior control on mobile commerce acceptance among youth.

Discussion

This study was about the determinants of mobile commerce acceptance among youth in Tanzania. The research wanted to identify the determinants of mobile commerce acceptance among youth. The researcher addressed three aspects in carrying out this research, so the study was carried out to analyze the attitudes towards acceptance, subjective norms, and perceived behavior control on the acceptance of mobile commerce among Tanzanian youth. According to the findings, attitudes toward acceptance and subjective norms had an insignificant influence on youth acceptance of mobile commerce, whereas perceived behavior control had a contribution to youth acceptance of mobile commerce. The results of this study supported the null hypothesis on attitude and subjective norms on mobile commerce acceptance among youth. As a result, the study provides a clear concept of how perceived behavior control contributes directly to youth acceptance of mobile commerce.

Study implication

The study's findings have resulted in the following theoretical and practical implications for future usage: Theoretical implications support the Perceived Behaviour Control construct, which is part of the Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA) theories, which was important in Tanzanian Youth Acceptance of Mobile Commerce. Since the study was guided by the Theory of Planned Behavior (TPB)

and Theory of Reasoned Action (TRA), it has been demonstrated that customers perceive behavior controls as a positive acceptance of mobile commerce platforms and those that are simpler to use and reliable. In addition, customers evaluate mobile commerce products based on how user-friendly and reliable the system is. Because of this, the Theory of Planned Behavior (TPB) has been valuable in studying how mobile commerce is being accepted in Tanzania's telecom industry. The methodology could be used in future research on other developing countries.

The practical implications of these findings are related to product development, pricing, and marketing. The result indicates that attitude and subjective norms were found to have no significant influence on the acceptance of mobile commerce among youth, implying that Tigo Tanzania PLC and other telcos should not consider subjective norms and attitudes as determinants of mobile commerce, rather they should focus on other factors because subjective norms do not support easy mobile acceptance among the youth. Tigo Tanzania PLC and other telcos must put more controls in place by lowering their mobile commerce costs in order to provide motivation for more users, particularly youth, and focus on tailored/customized products and marketing strategies catered to connecting users and their shared values, which they believe make them part of the mobile commerce users. However, control factors such as merchants' payments, affordable internet bundles, online shopping, bill payments, and improvement of Tigo Pesa Apps should be put into consideration as this will promote and quickly increase the acceptance of mobile commerce.

Conclusion & recommendation

The study's goal was to identify the determinants of mobile commerce acceptance among Tanzanian youth by assessing youth attitudes toward mobile commerce acceptance, subjective norms, and perceived behavior control. The findings of this study are consistent with the Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA) in terms of examining the Attitude towards Acceptance, Subjective Norms, and Perceived Behaviour Control on the Acceptance of Mobile Commerce among Tanzanian Youth. Perceived behavior control has a favorable impact on mobile commerce acceptability in Tanzania. The research was able to incorporate a stronger representation of demographic characteristics, including gender concerns. The study recommends that Tanzanian telecommunications companies consider the needs of their young customers to reduce stiff competition from other Tanzanian telcos. The organization should have a wide range of

promoting and innovating new packages to attract young customers, as well as enacting strategies to ensure that there is mobile commerce promotion of the TIGO mobile network and appreciation by its customers.

Limitations and Areas for Further Study

This study was conducted at Tigo Tanzania PLC HQ in Dar-es-Salaam to represent the case of determinants of mobile commerce acceptance among youth. Because the number of users varies by telco on the level of mobile commerce acceptance, the results may be limited for generalization to other young customers. The sample, responses, and results of the study confined to one area may not be a representation of the beliefs and patterns of all people accepting mobile commerce. This may serve as a pilot study for understanding the determinants of mobile commerce acceptance among youth in Tanzania. Therefore, it has been recommended that further longitudinal research using diverse sampling mechanisms be conducted. Further research should include larger sample size and should not be limited to a single geographical location. It can be conducted on mobile network operators (MNO) youth customers from other telcos in Tanzania, such as Vodacom, Airtel, and Halotel, to identify the determinants of mobile commerce acceptance among youth.

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