

## THE EFFECT OF INTERNAL AUDITING ON PROCUREMENT PERFORMANCE IN PARASTATAL ORGANIZATIONS OF TANZANIA

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### ABSTRACT

*Despite the critical role of internal audit units along with various strategies undertaken to enhance this role, presence of fraud, corruptions and other unethical practices still discontented with the auditing units inability to undertake auditing functions effectively without being detected and become a common phenomenon in parastatal organizations of Tanzania. This paper determined the role of internal audit on procurement performance. Specifically, it determined the influence of competence, independence, and management support on procurement performance and recommended strategies for improving the same. Quantitative approach was adopted and data were drawn from an explanatory research design sampled with 94 parastatals of Dar es Salaam through questionnaires from head of departments particularly user departments. Descriptive data analysis were employed to get mean and standard deviation of the findings, whereby data were summarized using frequency distribution tables and finally multiple regression model was used to analyze the data. The findings showed that independence and management support had a significant positive association with procurement performance at  $p < 0.05$ . Competence had a non-significant positive association with procurement performance. The study recommended managements of parastatal organizations to provide training opportunities to the internal audit sections, ensuring the internal auditors to exercise their duties with autonomy as well as be free from any type of influence. Furthermore, management should ensure that internal audit sections are given full support to execute their functions thereby ensuring satisfactory procurement performance.*

**Keywords:** *Internal Auditing, Staff Competence, Independence, Management Support, Procurement Performance*

### INTRODUCTION

#### Background Information

Internal audit is one of the important functions within an organization as it ensures achievement of accountability, responsibilities and value for money within the organization. It assists in detecting misuse of public resources, malpractices and fraud, and alerts the top management wherever necessary (Alzeban and Sawan, 2013). Internal auditing as defined by the Institute of Internal Auditors (2010) is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. The definition suggests that internal auditing should be an independent function carried out by competent personnel, free from bias from top management or other stakeholders within the organization.

Following its significant role in the organization, internal audit has become very popular, as it prevents a lot of misuses and malpractices especially in the procurement function where huge amounts of public funds are spent. Procurement as a function is estimated to spend between 50-70% of the annual budget for most of the developing countries (Matto, 2017; Mrope, 2018). The Controller Auditor General (CAG) reported that in 2018/2019, a total amount of TZS

1,614,407,976,973 was spent by 185 LGAs and TZS 1,302,794,588,840 in the previous financial year in the procurement of goods, service and works. Such a huge expenditure attracts a lot of malpractices, fraud or misuse of funds which negatively affect organizational performance and the nation at large (Matto, 2017). This calls for having well established, effective and independent Internal Audit Unit to prevent such malpractices which contributes to poor performance in the organization (Mihretet *et al.*, 2010; Gros *et al.*, 2016).

As proclaimed by Alzeban and Gwilliam (2014), for the internal auditing to perform its functions effectively, it needs competency, freedom from bias, independence and full support from the top management. Likewise, Arena and Azone (2009) portrayed that the internal audit effectiveness is affected by the characteristic of the audit team, activity and audit process, and the organization relationship. However, Gamayuni (2018) came up with different observations by revealing that management support does not affect the effectiveness of internal auditing function but agreed that auditing effectiveness is affected by the internal auditor competence, internal auditor objectivity and organization culture. While all these facts keep unveiled, various practices have been experienced in different countries regarding the internal audit operations.

In Saudi Arabia, as portrayed by Alzeban and Sawan (2013), the internal audit departments lack support from the top management which leads to budget constraints, limited number of staff and lack of necessary facilities required for executing their day to day operations. Not only that, but also, they lack the required skills, competence and independence in performing their responsibilities. The same was portrayed by Yusof *et al.*, (2019) in Malaysia who found that internal audit units lack adequate number of staff, inexperienced and the tendency of interference from top management when performing their functions and sometimes permitting the non-audit functions. In Libya, AbuAzza (2012) supported by Changwony and Rotich (2015) revealed that, the internal audit does not report to the appropriate level in the organizations; they report to chief executive officers rather than to the board of directors. Also, in Kenya, as revealed by Nyaga (2018) the internal audit functions lack independence in evidence collection and internal audit staff are assigned duties other than auditing which definitely affect their scope and independence.

In Tanzania, as revealed by Tulli (2016), the internal auditing function is affected by structural limitations and capability deficiencies in terms of staffing, insufficient funding and lack of other working facilities. Supporting this, Shishiwa and Said (2020) portray that, the internal audit units lack government support which leads to having few numbers of staff, insufficient fund for undertaking their responsibilities and lack of independence. It was further reported that the internal audit works as a management committee rather than an advisory committee. According to PPRA 2017/2018, PPRA 2018/2019 reports, many parastatal organizations did not prepare audit reports timely. Also, they failed to detect the misuse, fraud and malpractices taking place in the procurement function (URT, 2020). Surprisingly, a lot of weaknesses were normally detected by the external auditors. This observation has raised a concern on the performance of internal audit units with procurement functions within public organizations. Henceforth, the intention of this study is to examine how the competence, independence and top management support affect the effectiveness of the internal audit function in the local government authorities.

### **Problem Statement**

All public organizations are required to have an Internal Auditing Unit/Department which is responsible for auditing all organizational activities. This helps in safeguarding the organization assets, protecting the organization from the possible risks, fraud and malpractice. As commented by Zakaria *et al.* (2007), the internal audit is the central function that acts as a monitoring mechanism to ensure that risk management practices are operating effectively. However, the experience shows that the presence of various malpractices in many parastatal organizations are related to procurement functions (URT, 2018; URT 2019). The preliminary survey conducted by the researcher found that, many parastatal organizations experience problems of misuse of public funds through procurement process. For instance, CAG report of the financial year 2017/2018, shows that there were procurements without tender board prior approval contrary to what is required by the laws worth TZS 5,373,435,190.36. The payment for non-delivery procurement worth TZS 5,356,549,884.76. Also, for financial 2017/18 and 2018/2019, CAG report shows that TZS 5.379.6 Billion were lost at Tanzania Ports Authority (TPA) alone through procurement irregularities (CAG 2018; CAG, 2019; CAG, 2020). Also, CAG report of 2018 show that, 27 LGAs ordered and paid TZS 1,090,741,646 for goods, but the same were not delivered by suppliers. In the financial year 2017/18, 15 LGAs ordered and paid TZS 573,039,278 for goods, but the same were not delivered by suppliers (URT, 2018; URT 2019). Surprising, all these malpractices were not detected by internal audit units which were within the organizations, instead were revealed by the external auditors for CAG office or from PPRA.

The United Republic of Tanzania has taken a lot of efforts to ensure that the internal audit department performs its function of detecting fraud and malpractices in the procurement process and advise the top management as deems necessary with greater effectiveness. For instance, the government enacted the Public Procurement Act, 2011 and its Regulation 2013 (as amended 2016). The act has a special clause which requires the head of internal audit unit to prepare quarterly audit report which includes procurement issues and submitted to the PPRA; Provision of periodic training to the internal audit units from time to time to improve their competence; and make frequent audit by an external auditor from PPRA or CAG office and alike. However, besides those effort undertaken by the government to improve the performance of internal audit function with procurement issues, these units have failed to detect frauds and malpractices before and after taking place in the procurement function in different parastatal organizations, leaving the vices to be detected by the external auditors from CAG or PPRA (Matto, 2017).

Several authors have studied on factors affecting the effectiveness of internal audit function. For instance, Dellai and Omri (2016) studied on factors affecting the internal audit effectiveness in Tunisia and found that effectiveness of IA is positively influenced by the independence, objectivity and management support for internal audit. Gamayuni (2018) studied factors affecting internal audit function affectivity in Indonesia and found that auditors' competence, unbiased and impartial attitude, management support and organization culture influence internal audit function effectiveness. Also, Nyanga *et al.*, (2018) in Kenya studied the influence of internal audit independence on internal audit effectiveness and revealed that internal audit independence had positive and significant effect on internal audit effectiveness in Kirinyaga county government.

However, on the best knowledge of the researcher, there were scanty studies which have shown to what extent the internal auditing failed to detect the malpractices which affects the procurement performance in parastatal organizations in Tanzania. Hence forth, this study is intended to examine the role of internal audit on detecting of malpractices which lead to best procurement performance in the parastatal organizations which specifically examined the effect of competencies independency and top management support of the internal auditing on procurement performance.

### **Objectives of the study**

The main objective of this study was to determine the role of internal auditing on procurement performance in parastatal organizations in a bid to recommend measures for improving the internal auditing role in Tanzania. Specifically, the study assessed the factors affecting internal audit functions on the influence of competence, independent and top management support on internal audit functions on the procurement performance in the parastatal organizations and recommended strategies for improving the same.

## **LITERATURE REVIEW**

### **Theoretical review**

The role of internal audit on procurement performance in parastatal organizations has been theorized by Principal-Agency theory.

This theory was proposed by Alchian & Demsetz in 1972 and further developed by Jensen and Meckling in 1976. The theory explains the relationship between the principals, such as shareholders and agents as company executives and managers. Principal Agency Theory assumes that both the agent and principal focused on their expectations, the actions of the agent have external effects on the welfare of the principal, and there is asymmetric information that gives the agent discretionary freedom (Eisenhardt, 1989). Due to working on self-interests, a potential goal conflict happens (Magasi *et al.*, 2020). Thus, appropriate measures to monitor the agent from opportunistic actions are needed (Jensen & Meckling, 1976; Magasi, *et al.*, 2020; Panda & Leepsa, 2017). The establishment of the internal audit unit in the organization is aiming to monitor the action of the agent through implementation of the contracted agreement with its principal, aimed making sure that the agent is not doing contrary of what has been agreed with his principal. Studies show that for internal auditing to be effective it needs to independent, competent and get support from the management when executing its functions (Dellai & Omri, 2016).

## Empirical review

It should be understood that internal audit has been a rampant issue in the parastatal organizations. These have been experienced on the competence, independence as well as top management support (Plant & Padotan, 2017; Nyaga *et al.*, 2018; Salehi, 2016).

Starting with the influence of competence, critical factors affecting the procurement performance were associated with knowledge, skills and behaviours of staff (Shamsuddin *et al.*, 2014). This aspect was influenced by unethical issues that hamper the internal audit role on achieving procurement performance. These include but not limited to the failure to detect fraud, corruption and malpractices within the organization (Janse van Rensburg & Coetzee, 2016). Similarly, other literature point out that competent and qualified staff influence the effective role of internal auditing in the parastatal organizations (Mullins, 2015). Moreover, Plant and Padotan (2017) revealed that lack of personal skills such as self-management, professional skepticism and judgment are rampant factors affecting internal auditing role in the parastatal organization. On the other hand, unqualified staff which are selected based on reputation and relationship with top management and lack of professional qualification, experience and opportunities for continuous training are routine factors affecting the internal auditing function on achieving procurement performance (Sawan, 2013). The same situation has been observed by Mustika, (2015) who proclaims that better performance have multidisciplinary professionals like accounting, governmental administration, and communication influence the internal auditing on procurement performance.

In discharging with the effects of independence, internal auditing on procurement performance has been rotated around the auditors' works without any interference (IAA, 2010). Also, independent factor is associated with ability to undertake its activities as guided by the internal audit plan as well as policies guided by governed rules and regulations (Yosef, 2019). Furthermore, independent role is organized when the internal auditors report the unethical issues such as fraud and malpractice which occur in the organization (Nyaga *at al.*, 2018). Nevertheless, free from any intervention on the implementation of auditors role is a crucial factor influencing the internal auditing function on procurement performance and report it to chief executive officer (Mustika, 2015). Indeed, Sawan (2013) was contrary to this concern who revealed that chief internal auditor does not report directly to the Chief Executive officer of the organization, instead he is supposed to report to the General Manager of Finance Management; this jeopardizes the function of the internal audit unit as the chief internal audit cannot report the findings which marginalized his/her position. Another factor revealed that the independence of internal auditor is guided by freedom from interference so as to remove any kind of bias when they undertake the role of gathering evidence, reporting and when making recommendations for organizational improvement (Macrae & Van Gils (2014; Mustika, 2015). Similarly, other literature contented that provisions of independent assurance to executives such as organization's risk management, governance, internal control, ethical processes and strategic orientations are crucial independent factors envisaged from internal auditing on procurement performance (Ain *et al.*, 2019). Sometimes the role of internal auditing is not fully independent to perform its duties and responsibilities since it faces interference from top management while to some other circumstances this department is put or mixed with other departments (Sawan, 2013; Shishiwa & Said, 2020). This is coupled with the internal audit staff who were requested to perform a non-audit function (Yosef *et al.*, 2019)

Realities from reviewed literature indicate that top management support also affect the role of internal audit to achieve procurement performance. One of the factor associated with this aspect was reviewing and accepting audit plan for the execution of its responsibilities (Dellai & Omri, 2016; Salehi, 2016). Also, top management is required to provide adequate resources and facilitating the provisions of training opportunities and another development programme for enriching auditing standard so as to achieve procurement performance (Salehi, 2016). Similarly, top management is required to provide funds for allocation of sufficient budget and staff of ensuring adequate procurement performance and implementing the recommendations that are provided by internal auditors (Ahmad *et al.*, 2009). Furthermore, assisting on the hiring trained, and experienced staff as well as improving capabilities and efficiency are critical factors for improving the role of internal auditing on achieving procurement performance (Alzeban & Gwilliam, 2014). The same was depicted by Alzeban and Aswan (2013) who revealed that, through management's support, the internal auditors have the required resources for undertaking their tasks and meeting their responsibilities.

Another factor affecting the role of internal auditing has been revealed by Onumah and Yao Krah (2012) who found that internal audit effectiveness is mainly affected by lack of management support and insufficient resources. Some literature support this findings by depicting that internal audit department lacks support from the top management which eventually

leads to internal audit to experience budget constraints, a limited number of staff and lack of necessary equipment (Sawan, 2013). However, Gamayuni (2018) held an opposite observation that management support cannot directly affect the effectiveness of the internal audit function. Although the researcher supported that, the internal auditor competence, auditors objectivity and organization culture have direct influence on internal audit function effectively.

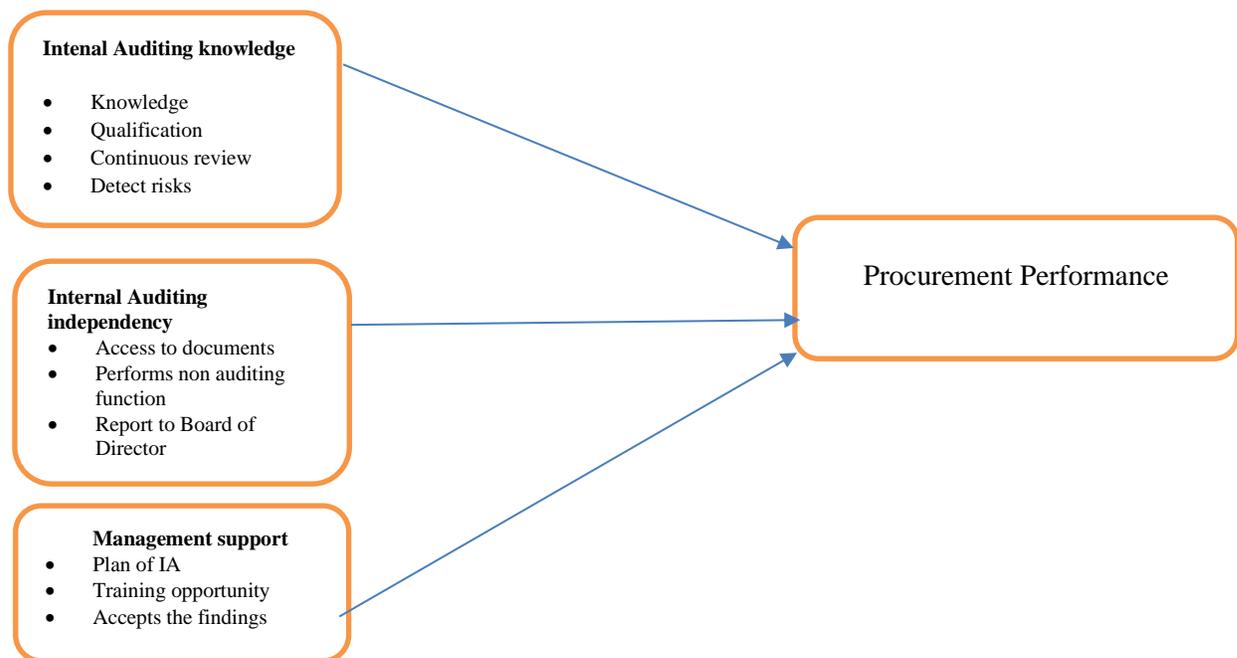
Finally, the role of internal auditing helps to achieve procurement performance. In this aspect we can define procurement performance to be efficiency and effectiveness in acquiring goods, services and works required by the organization (Baily *et al.*, 2010). Not only that but also, effective procurement process brings a lot of benefits to the organization, like reduced cost, reduced lead time, user department’s satisfaction and compliance to procurement regulations (Bolton, 2006). Also, procurement function has direct relationship with the organizational performance due to its role on reducing cost of goods and services procured by the organization. However, any saving in the procurement process bring effects on turnover, gross profit, efficiency, total costs and organization’s equity (Kinyanjui, 2012). The quality of goods, services, infrastructures, and the effectiveness of public services much depend on well-managed public procurement (Lyson and Farrington, 2016). A well-managed procurement function is associated with many factors like appropriate monitoring mechanism, motivation of procurement officers, staff competence, management support and alike (Mwihaki, 2018).

Realities from reviewed literature indicate that there are mixed results on the factors that influence the role of internal auditing on procurement performance, not only that but also, there is a very scanty studies which determine the role of internal audit detecting malpractices on procurement performance in parastatal organizations in Tanzania. Therefore, this study aimed to bridge this gap by showing the critical role of internal audit with the view to determine the factors affecting internal auditing on procurement performance and suggesting whether the factors have positive or negative effects on the operation of procurement performance within the parastatal organizations in Tanzania context.

### Conceptual Framework

Conceptual framework is a concise description of the phenomenon under study accompanied by a visual depiction of the major variables of the study (Mugenda, 2008). According to Lisa, (2010) conceptual framework is a diagrammatical representation that shows the relationship between dependent variable and independent variables. In the study, the conceptual framework will look at the factors affecting internal auditing on procurement performance in Parastatal organizations in Tanzania.

Figure 1: Conceptual Frame work



Dependent variable

## METHODOLOGY

The study used an explanatory research design that is intended to establish a causal relationship between variables (Saunders et al, 2012). The study used this strategy in order to explore the relationship between independent and dependent variables. The study covered 94 parastatal organizations located in the Dar es Salaam region. The targeted population was 712 respondents who were heads of departments from these procuring entities. The sample size was determined, by using simplified Yamane Formula (1967) as shown below;

$$n = \frac{N}{(1+N(e)^2)}$$

$$n = \frac{712}{(1+712(0.05)^2)}$$

$$= 258$$

Whereby n is the required sample, N = Target Population, e = Level of confidence i.e., 5%. Therefore, out of 712 head of departments, 258 head of departments were selected from user departments.

A self-administered questionnaire that was personally delivered to the participants through the drop-off and pick-up method (DOPU) was adopted for the study. The questionnaire collected information on the biodata of the study participants alongside information that determined the procurement performance. The items in the questionnaire were operationalized using 5-point Likert scales, ranging from (1= strongly disagree) to (5 = strongly agree). The multiple linear regression analysis was used in data analysis, and the descriptive statistics. Exploratory factor analysis (EFA) was conducted to determine if prior identified items define a particular construct. This involved the computation of construct reliability and validity. Factor scores for each defined construct were computed, ready to be used for multiple linear regression analysis. The researcher used multiple regression analysis to show the relationship and the effect of the independent variables to the dependent variables. The study was subjected for testing the multiple regression model such as linearity, homoscedasticity, the absence of multicollinearity and normality (Saunders at el., 2012)

The multiple regression model that was used is given as follows;

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$ . Where: Y = Procurement performance;  $\alpha$  = Constant of Regression;  $\beta$  = Beta Coefficients;  $X_1$  =Competence of the internal auditor;  $X_2$  = Independence of the internal audit;  $X_3$  = Management support; and  $\epsilon$  = Error of Regression.

Information on the variable matrix to show how each of the variable was measured or captured during data collection and entry/analysis has been summarized in table 1 here under;

**Table 1: Matrix of Variables**

Variables	Indicators	Measurement Scale	Source of the Previous studies
Competency	Auditing knowledge Qualifications and experience. Continuous auditing review Detects risks and deficiencies	5-point Likert Scale	Ndimitu, <i>et al.</i> (2018). Obeng (2016) Ahmad <i>et al.</i> , (2010); Shamsuddin <i>et al.</i> , (2014).
Independency	Accessibility of documents Determines auditing scope Non auditing function IAU reporting.	5-point Likert Scale	Nyanga <i>et al.</i> , (2018), Sawan (2013) Ndimitu, <i>et al.</i> (2018). Obeng (2016)

Management support	IAU Plan Training opportunity Accepts the IUA findings	5-point Likert Scale	Alzeban and Sawan (2013) Ndimindu <i>et al.</i> , (2018).
Procurement performance (dependent variable)	On timely delivery Right quality Reasonable cost	5-point Likert Scale	Mbura and Kitheka (2020) Kirai, and Kwasira, (2016).

## FINDINGS AND DISCUSSION

### Sex

Sex of the respondents was analysed and the findings revealed that 63.9% of the respondents of this study were male and 36.1% were female. The findings correlate to those of Umjwali (2012) who revealed that 63% of males are actively engaging in the manufacturing sector against 37.0% of female counterparts, at a difference of 26%.

### Age

The descriptive analysis under this study categorized the age of the respondents basing on age categories. A majority 123 (51.0%) were aged between 25 – 44 years while 42(17.5%) were aged between 18-24 years and 76(31.5%) were aged between 45- 60. This implies that the majority of the respondents (62.5%) are above 25 years old who were matured enough.

### Level of education

The level of education of the respondents was analyzed and the findings show that 6(2.5%) of the respondents had completed certificate level, 23(9.5%) respondents had diploma, 80 (33.2%) respondents had a bachelor degree. 117(48.6%) respondents had a master degree while 15 (6.2 %) had a PhD. This implies that majority of the respondents (88.0%) were well educated and had a level of education above a bachelor degree. Table 2 below shows the level of education of the respondents.

**Table 2: Distribution of Participant Demographic Characteristics**

Variable	Frequency (Percentage)	
Sex		
Male	154	63.9
Female	87	36.1
Age		
18-24 years	42	17.5
25-44 years	123	51.0
45-60 years	76	31.5
Level of education		
Uneducated	1	0.4
Certificate	5	2.1
Diploma	23	9.5
Bachelor	80	33.2
Master degree	117	48.5
Doctorate	15	6.2

### The influence of competence of internal auditors on procurement performance

The respondents were requested to indicate their level of agreement with some statements to measure the extent to which competence of internal auditor influence procurement performance in the parastatal organizations. The averages and the standard deviation of responses are presented in table 3 below;

**Table 3: Competence of Internal Auditors**

Statement	Mean	Std. Deviation
Internal auditors possess the required knowledge	3.85	0.917

The internal audit department is adequately staffed in terms of number, qualifications and experience.	3.86	0.888
Effective and continuous internal auditing to review procurement function	3.72	0.975
Internal audit unit detects risks and deficiencies	3.88	0.962

The respondents agreed that the internal auditor has the required knowledge to carry out the auditing function in an effective and efficient way (mean 3.85). This implies that the internal audit could reveal any weakness within the organization. This finding is in harmony with the findings of Obeng (2016) who revealed that internal auditor in the selected financial institutions in Ghana possesses the adequate knowledge, sufficient skills and technical expertise in carrying out the internal audit function. However, the findings contradict to the findings of Yusof *et al.*, (2019) who revealed that in Malaysian public sector organizations, internal audit staff lack competence and skills as well as the need for continuous learning and training in the field, has made them weak in undertaking their responsibilities. The same scenario has been reported by the previous researchers who studied the same area (Ahmad *et al.*, 2010; Shamsuddin *et al.*, 2014).

The respondents agreed that the internal audit departments are adequately staffed in terms of number, qualifications, and experience (mean 3.86). This implies that the internal audit has adequate staff required to perform the required functions. Such findings concur with the finding of Obeng (2016) who categorically states that of recent the internal audit unit has been sufficient in terms of number, qualifications, and experience. The respondents agreed that the internal audit unit is effective in continuously reviewing the procurement function (mean 3.88). Effective and continuous internal audit helps to review the procurement function. By employing such tasks, the internal audit unit detects all procurement frauds and protects the organization from procurement risks that are associated with unethical practices at the appropriate time before they take place and cause loss to the organization. Such findings correlate to the findings of Ndimitu *et al.*, (2018) who revealed that the internal audit unit performs a continuous review of the organization's operations and procedures and gives recommendations to the management for appropriate action where necessary.

Furthermore, the respondents agreed that the internal auditors are able to detect risks and deficiencies which take place in the organization including the procurement department (mean 3.88). This implies that the internal audit function protects the organization from fraud and mismanagement due to the fact that it is able to detect the risks before affecting the organization. Such findings echo those of Obeng (2016) who revealed that, internal auditors are able to detect risk-associated in financial statements in auditee's work and make necessary recommendations.

#### The influence of Independence of Internal Auditing on procurement performance

The respondents were requested to indicate their level of agreement with various statements on independence of internal auditing. The averages and the standard deviation of responses are presented in the table 4 below;

Table 4: Independence of Internal Auditing

Statement	Mean	Std. Deviation
Internal Auditing unit has direct access to all procurement documents	3.85	0.989
Internal Auditing unit determines the scope of auditing	3.89	1.002
Internal auditors function performs duties other than auditing	3.74	1.030
Internal auditing unit report functionally to the board of director	3.91	1.099

Majority of the respondents agreed that the internal audit units have access to all procurement documents (mean 3.85). Such findings concurred with the findings of Obeng (2016) who agreed that the internal audit departments have the right of accessing any documents. However, such findings contradict those of Nyaga *et al.*, (2018) who revealed that there are elements of restrictions in accessing some evidence by internal audit. This implied that internal audit units are not in the position to disclose all weaknesses and shortfalls which take place in different departments within the organization in which procurement function is inclusive.

The respondents agreed that the internal audit unit determines the scope of auditing (mean 3.89). This implies that the internal audit unit is free to determine the scope of the auditing exercise without internal or external organization influence. Findings are in harmony with the findings of Ndimindu *et al.*, (2018) who argued that internal audit units are

free from interference in scoping work and communicating results. The respondents disagreed that the internal auditor's function performs duties other than auditing (3.71). Although the study findings present that picture, such findings are in contradiction to those of Nyanga *et al.*, (2018) who revealed that internal auditor performs other function rather than auditing function. The respondents agreed that the internal audit report functionally to the audit board of director, or audit board and not head of department. Such findings support those of Ndimindu *et al.*, (2018) who argued that there was less variability on audit committee reporting to the board regularly. Findings contradict with those of Sawan (2013) who revealed that internal audit in the Ministry of Foreign Affair in Saudi Arabia lacks independence when undertaking its function. For instance, the internal auditor does not report to the Chief Executive Officer of the organization but to the director of finance instead. Such a situation makes it difficult for the IA to reveal weaknesses of their immediate supervisors.

#### The influence of Management support on procurement performance

The respondents were requested to indicate their level of agreement with various statements on management support. The averages and the standard deviation of responses are presented in the table 5 below;

Table 5: Management support

Statement	Mean	Std. Deviation
Management supports the plan of IAU	3.92	1.003
Management provides training opportunity for IAU	3.83	0.985
Management accepts the findings of the Internal audit and works with them	3.93	0.966

The respondents were asked to give their view if the management accepts the findings of the internal audit and works with them. The respondents agreed that the management accepts the works with the recommendation effectively (Mean 3.93). The finding concurred to those of Ndimindu,*et al.*,(2018). The respondents agreed that the management provides training opportunity for Internal Audit Unit. This implies that the internal audit unit get opportunities to learn new techniques and expertise in relation to their field from time to time. This finding is in contradiction with the findings of Alzeban and Sawan (2013) who revealed that management of Saudi Arabia public sector did not provide training opportunities to their internal audit unit staff.

#### Procurement performance

The averages and the standard deviation of rating of the procurement performance of the parastatal organizations at the time of the study are presented in the Table 6 below;

Table 6: Procurement Performance

Statement	Mean	Std. Deviation
Timely delivery of the procured goods/ services	3.35	1.202
Quality goods due to the efficiency	3.53	1.029
There are minimum complaints from the user departments	3.32	1.104
Wastage and damages have been eliminated	3.41	1.005
Cost reduction	3.40	1.099

Procurement performance was defined by five different items, these items were measured using the Likert scale ranging from 1 to 5. Each item had 1 as the minimum score and 5 as the maximum score. On average, all items had the same mean score of 3.4 (SD = 1.08). Although quality goods due to the efficiency had the maximum mean score 3.53 (SD = 1.029) while there is minimum complaints from the user departments had the minimum mean score of 3.32 (SD = 1.104). These findings contradict to those of Kirai and Kwasira (2016) who revealed that the organization did not offer quality services and the efficiency of the procurement process did not reduce cost in the organization. However, these findings are in line with findings of Thumbi and Mutiso (2018) who revealed that the internal auditing function has a significance positive influence on procurement performance.

Theoretically, the study findings related to agency theory since the theory relies more on the requirement of the principal to institute monitoring mechanisms to monitor agent implementation of the contract to deliver the required objectives

(Jensen and Meckling, 1976; Magasi, *et al.*, 2020). For this case, internal auditing is used as a monitoring mechanism deployed by the procuring entities to monitor the performance of procurement practitioners. In agency theory, the agents were required to adhere to codes of ethics and standard when undertaking their duties to avoid a conflict of interest that inculcating the issues of fraud, mismanagement and corruption which affect the procurement performance (Obicci, 2015).

#### Inferential Statistics

##### Multi-Collinearity Test Results

To determine whether the independent variable in the study were correlating, both tolerance and variance inflation factors were used. The results of the multi-collinearity test are presented in the table 7 below;

Table 7: Multi-Collinearity Test Results

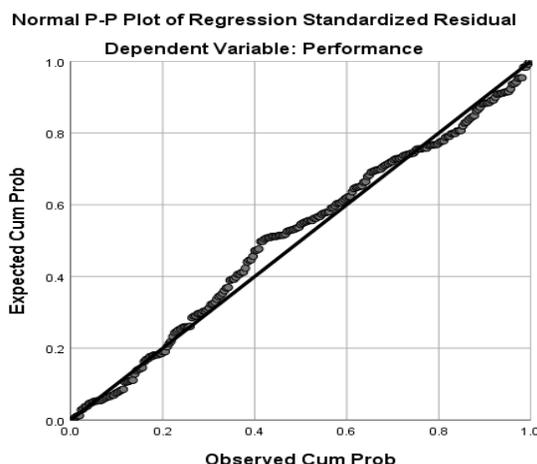
	Collinearity Statistics	
	Tolerance	VIF
Staff competence	0.313	3.194
Internal auditing Independent	0.325	3.075
Management support	0.369	2.708

The finding above (tolerance factor 0.313, 0.325, and 0.369 respectively) indicates an absence of collinearity between the variables. The VIF for the variables falls within the acceptable levels of less than 5(3.194, 3.075 and 2.708 respectively). The strength of association between the study variables was assessed using Karl Pearson's Coefficient of correlation. It was established that all the variables had a significant positive association ( $p < 0.05$ ) at 95% confidence level.

##### Normality of residuals

The normality of residuals were tested using the P-P plots. The P-P plots showing the expected cumulative probability versus observed cumulative probability revealed that values lies on or are very closer to the diagonal line. Although minor departure from the diagonal line are observed, this may not violate the preset assumption as the departure cover a short distance as compared to other values which fits the diagonal line. Figure 2 below;

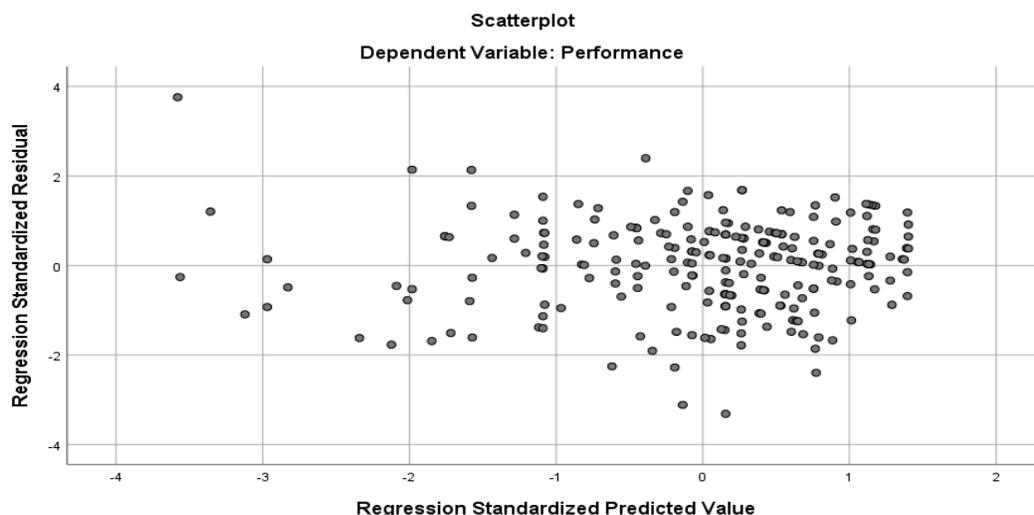
Figure 2: Normality of residuals



##### Homoscedasticity

Homoscedasticity of variances was supported as the plots of standardized values predicted by the model against the standardized residuals observed had a random array of plots didn't have a funnel shape. Figure 3 below;

Figure 3: Homoscedasticity



Reliability test

The study variables have undergone the reliability test in order to determine if the variables are reliable or not. In this study, the Cronbach’s alpha coefficient was used to determine the reliability of the measurement instruments as supported by Sekaran and Bougie, (2009). According to the authors, the instrument will be reliable if Cronbach’s alpha value is 0.7. For this study, the reliability scores for the variables are as follows; internal auditing competence = .828; internal auditing independency = .854, management support score = .842; and procurement performance score = .884 as presented in Table 8 below. Therefore, all variables instruments are reliable.

Table 8: Reliability statistics

Variable	Cronbach's Alpha	No of Items
Competency	0.828	4
Independency	0.854	4
Management	0.842	4
Procurement	0.884	5

Kaiser-Meyer-Olkin (KMO) and Bartlett’s test

The Kaiser-Meyer-Olkin measure of sampling adequacy value was 0.940, which is above the threshold value 0.5, and Bartlett's test of sphericity had a statistical significance (p=.000) and therefore supporting factorability of the variables under the study as indicated in Table 9.

Table 9: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.940
Bartlett's Test of Sphericity	Approx. Chi-Square	2377.641
	Df	120
	Sig.	.000

ANOVA F test

ANOVA F test was carried out to evaluate overall model fit to establish if it fits the acceptable levels on statistical criteria. Table 5 indicates that the overall model fit is satisfactory since the p-value for the regression model F test is .000 which is less than the critical p-value (0.05) at the confidence level of 95%. Therefore, the model is highly significant to conclude

that the three independent variables competence, independence and management support together predict the procurement performance as shown in the table 10 below;

Table 10: Anova

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.925	3	20.642	36.773	.000 <sup>b</sup>
	Residual	133.033	237	.561		
	Total	194.957	240			
a. Dependent Variable: Performance						
b. Predictors: (Constant), Management Support, Independence, Competence						

#### Regression Model

The findings indicate that the adjusted R squared was 0.309 meaning that about 30.9% of the change in procurement performance at parastatal organization could be explained by internal auditing. The remaining 69.1% variation in procurement performance could be explained by other factors not included in the model. The regression model summary results are presented in Table 11 below;

Table 11: Model summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. Change
1	.564 <sup>a</sup>	.318	.309	.74921	.318	36.773	3	237	.000
a. Predictors: (Constant), Management Support, Independence, Competence									
b. Dependent Variable: Performance									

#### Regression Model Result

The findings indicates that competence had a coefficient of 0.012 (p-value=0.917); this means that for each unit increase in competence, then procurement performance increases by 0.012. Independence had a coefficient of 0.227 (p-value=0.022); this means that for each unit increase in independence, procurement performance increase by 0.227. Furthermore, management support had a coefficient of 0.394 (p-value=0.00); this means that for each unit increase in management support, procurement performance increase by 0.394. Independence and management support have a positive statistical significance on procurement performance in the parastatal organizations while staff competence had an insignificant influence on procurement performance. This can be summarized by the regression equation given below; Performance (Y) = 0.952 +0.012X<sub>1</sub>+0.227 X<sub>2</sub>+0.394 X<sub>3</sub> + ε as shown in Table 12 below;

Table 12: Regression Model Result

Coefficients a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.952	0.255		3.736	0.00
	Competence	0.012	0.114	0.01	0.104	0.917
	Independence	0.227	0.099	0.217	2.303	0.022
	Management Support	0.394	0.093	0.375	4.244	0.00

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The purpose of this study was to investigate the effects of internal auditing on procurement performance in the parastatal organizations in Tanzania. The findings show that independence and management support are significant attributes that enhance procurement performance. Conversely, staff competence was not significant attributes to influence procurement

performance. Therefore, enhancing independence and management support when undertaking the internal auditing function improves the procurement performance. Thus, the study concludes that the internal auditing function influence the procurement performance in the parastatal organizations in Tanzania.

### Recommendations

From the findings of the study, the study recommends that the parastatal organizations should ensure that the internal audit units are equipped with new knowledge and skills so as to undertake their responsibilities effectively. Public Procurement Regulatory Authority (PPRA) should provide training to the internal auditors on how auditing of procurement is done through TANePS. Also, the parastatal organizations should make sure that internal auditing is performing its duty independently and free from any type of influence or cohesion from inside and outside of the organization, and should not perform any non-auditing function. Moreover, the parastatal organizations should make sure that internal audit units are provided with the required facilities to ensure that they perform their responsibilities as planned.

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