THE CONTRIBUTION OF INTERNAL AUDITS ON THE EFFECTIVE PROCUREMENT ASSIGNMENTS IN SELECTED LOCAL GOVERNMENT AUTHORITIES IN TANZANIA

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A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY OF THE OPEN UNIVERSITY OF TANZANIA

2019

CERTIFICATION

The undersigned certify that they have read and hereby recommend for Examination a thesis entitled: *"The Contribution of Internal Audits on the Effective Procurement Assignments in Selected Local Government Authorities in Tanzania"* in fulfillment for the requirement for the Degree of Doctor of Philosophy (PhD) of the Open University of Tanzania.

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DECLARATION

I, **Joseph Iswante David,** do hereby declare that this thesis is my original work and has never and will not be presented to any other University or Institution for the same or similar award.

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Signature

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Date

DEDICATION

This thesis is dedicated to my parents Mr. David M. Marwa and Mrs. Rebeca C. Nyangige who initially introduced me to school when I was unknowledgeable to it and to my family for their unconditional love, moral and material support.

ACKNOWLEDGEMENT

ABSTRACT

This study through survey was carried in Mainland Tanzania with aim of assessing the contribution of internal audits on the effective procurement assignments in local government authorities in Tanzania. Primary data was collected from a sample of 241 respondents in 27 Local Government Authorities, Public Procurement Regulatory Authorities, Internal Audit General and National Audit General using structured survey questionnaire. Multiple Linear Regression model and exploratory factor analysis were employed using STATA in analyzing data. The findings reveal that internal audit competencies, procedures and independence positively affect contribution of internal audit on procurement assignments in LGAs. This is compatible to the Agency theory as collaborated with the Stewardship which need the Agent or manager i.e. internal audit to be reputable and competent in monitoring the principal's resources. Internal Audit Procedures on Procurement Assignments was the most influential factor in this study followed by internal audit competencies on procurement laws and independence of internal audit. The study confirms the importance of internal audit function in LGAs procurement assignments and concludes that internal audits in Local Government Authorities (LGAs) are ineffective and not contributing much on procurement assignments leading to losses as have evidenced by the Controller and Auditor General Reports. The study recommends that, internal auditors be trained on Public Procurement Act (PPA), be exposed to different audit environment, the number of auditors with different skilled should be employed. All procedures as stipulated in PPA should be known to auditors. Lastly auditors' independence should be enhanced by providing enough resources (funds) to the internal audit function, putting away political pressure on the auditors and providing access to information.

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LIST OF ABBREVIATIONS AND ACRONYMS

AC   Accounting Officer

CAG   Controller and Audit General

CEO   Chief Executive Officer

CMs   Council Members

COURT   Constitution of the United Republic of Tanzania

FC   Finance Committee

IA   Internal Audit

IIA   The Institute of Internal Auditors

ICT   Information, Communication, Technology

LGAs   Local Government Authorities

OGC   Office of Government Commerce in United Kingdom

PAs   Procurement Assignments

PFA   Public Finance Act

PFR   Public Finance Regulations

PMU   Procurement Management Unit

PPA   Public Procurement Act

PPR   Public Procurement Regulations

PPs   Procurement Policies

PPRA   Public Procurement Regulatory Authority

TB   Tender Board

URT   United Republic of Tanzania

WB   World Bank

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Chapter Overview

This is an introductory chapter. It lays the foundation of the study. It first spells out the background of the study. It further provides the statement of the problems, objectives of the study and research questions. It also provides the significance of the study, scope of the study as well as the structure of the study.

1.2 Background to the Study

Although the internal audit function in an organization is broadly well known, the key question that demands keen explanation is its contribution on discharging procurement assignments in public entities (Ali, 2016; Prawitt *et al.,* 2009). Auditing has been considered as a crucial element in assessing and reporting the effectiveness of the entity in attaining its objectives. The internal audit activity supports the whole organization because it has the legal role of assessing and reporting operational activities within the organization.

This legal role of an internal audit comes from the contract that is from the Agency theory in collaboration with the stewardship theory (Adams, 1994). The contract needs effective performance of an internal audit (agent), on behalf of the owner (government). To perform effectively an internal audit must be independent, competent, and use proper procedures when performing their assignment (Tahajuddin and Kertali, 2018). In recent years, Public entities have experienced challenges on the use of procurement funds (Matto, 2017). Some of the challenges includes weak

internal control, lack of staff capacity and lack of integrity. Due to the role of internal auditing and the trend of mismanagement of procurement in the public sector, there has been a debate on whether internal audit function performs its work appropriately or not (Matto, 2017; Shamki and Amur, 2017).

The thrust of the internal audit (IA) is to ensure compliance to procurement assignment in public entities. Regulatory framework demands greater involvement of internal audit in monitoring procurement activity within the public entities, local government authorities (LGAs) included (URT, 2011). No doubt the internal auditing activity relates to governance, given the role of the auditing within the entity, it should be able to respond to stakeholders' requirements by giving out assurance that risk management, governance and internal control on public entity's procurement are effective (Institute of Internal Auditors (IIA), 2012). To congregate this responsibility, internal audits should be competent, autonomous and supported by top management. Nevertheless, the audits' method itself and the whole process (procedures) should be appropriate to the activity (Badara and Saidin, 2013).

Internal audit is a tool for improving governance and accountability in the organization, internal audit has been used to evaluate and improve management activities within the organization and it is also a mechanism of governance system within the entity (Tabara and Ungureanu, 2012). Internal audit relates to the Agency theory. The Agency theory is a useful framework for designing governance and controls in the organizations. The theory attempts to explain the relationships between owner of the business (The government)/agent (management) and delegation of

control. The theory is extensively employed in management related literature to explain and predict the appointment and performance of internal audit (Larson, 2013).

Panda and Leepsa (2017), explain that internal audit function exists to monitor the management's activities and to attest to management's performance for the stakeholders' benefits. Management as stakeholder can use audit's recommendations to strength its internal controls and to improve its performance. The oversight institutions such as public procurement regulatory authority, Controller and Auditor General and internal auditor general offices may use internal audit reports for their actions and decisions. The public finance Act, 2001 Act No.6 of 2001, the public procurement Act, 2011 Act No.7 of 2011 and the public audit Act, 2008 Act No.11 of 2008, all these Acts give power to the oversight institutions mentioned above to use internal audit reports for their oversight roles.

According to Al-jabali et al., (2011), internal audit should audit ongoing operations of the organization, accounting control systems, administrative system, procedural operation performance in the organization and showing the extent of compliance with laws and regulations of the organization. Analytical skills for the auditors are a must, they must think critically for the survival of their entities. Internal audit functions are conscientious to assist management to show that they are managing the entities' procurement effectively (Etse and Asenso-Boakye, 2014). Due to the sensitivity of procurement, internal audit ought to execute its functions in a way that a momentous error, fraud, non-compliance and other exposures are detected when executing auditing engagement (IIA, 2016). Procurement is a decisive and expensive business activity for different public entities in the World. World- wide, for instance, more than

56% of the budget of the public entities is spent on procurement (Makabira and Waiganjo, 2014).

According to the World Bank (2017), public procurement is a powerful level for achieving economic, environmental, technological, and social goals in the Public entities. Procurement is increasingly recognized as a vital service in developing countries and it accounts for a big proportion to total expenditure (Makabira and Waiganjo, 2014). For instance, in Tanzania Mainland, Public Procurement accounts 60% of the budget. In Kenya, it is 60% of the total expenditure. In Angola, it is 58% of the budget and 70% of the budget in Uganda and in Malawi it is over 50% of public spending. Accordingly, 18.42% of the world GDP represents public procurement of goods, works and services (Makabira and Waiganjo,2014)

Effective public procurement mechanisms are essential to the achievement of goals and development of the nation, because they can facilitate a better allocation of resources towards development and enable improvement of public sector governance (Mugo and Ngugi, 2012). Procurement is identified as a vital in-service delivery in public sector (Basheka and Bisangabasaija, 2010). In Tanzania Mainland, LGAs as part of public sector have a responsibility of using their resources in the most acceptable manner to maintain peace, order, good governance and to promote social welfare and economic development of their citizens (Wakasangula *et al.*, 2015).

The need of internal audits multi-skilled to facilitate auditing on procurement cycle in LGAs cannot be overemphasized (URT, 2011, Njeru, 2015). Within the entity, IA activity has a responsibility of auditing the procurement and reporting the same to

respective authorities (URT, 2011). Internal audit function as a control and governance organ in providing assurance to the management that the procurement is carried out in accordance to the best practice.

The best practice amounts to effective procurement assignment that enable the sustainability and promote positive outcomes in economy, environment and in the society. The level of minimization of procurement costs, compliance with procurement legislations, quality of procured goods, works and services and accountability in procurement resources are the determinants of effective procurement assignment (Njeru, 2015; Njeru, *et al.,* 2014).

To achieve the best procurement practice, it demands taking care of the whole procurement cycle when making procurement decisions in the entities. Procurement practice by a large amount improves the effectiveness of procurement decisions (Njeru, 2015). The information provided by internal audit activity to its stakeholders, can improve relationship between the suppliers and buyers, which are some of the critical important factors that promote the effectiveness in procurement assignments (Onchoke and Wanyoike, 2016).

Internal audit function should provide information that brings value for money in procurement. Audit can facilitate the whole organization to work as a team towards achieving an acceptable Procurement assignment (Peterson *et al.,* 2003). Effective procurement assignment involves compliance with procurement laws, minimization of costs, accountability of procurement funds and quality of procured goods, works and services (Njeru, 2015).

1.3   Statement of the Problem

According to Matto (2017), reports have shown that there are several procurement practice mismanagements in most of the public sector organizations in mainland Tanzania. Over the last ten years, there have been an average of about 60/=billion mismanagement spending on procurement assignments (CAG Reports, 2008-2018). Both the Controller and Auditor General and Public Procurement Regulatory Authority (CAG and PPRA) reports have shown these malpractices consistently overtime (CAG Report, 2018). Scandals such as Kinondoni Municipal Council with the Quality Group Companies on the development of Coco beach (High Court, Land Division-Case No.334/2009) over TZS 40 billion irregularities on LGAs procurement for the year ending 30 June 2017 is an example of procurement mismanagement.[1]

Procurement assignments mismanagement can be attributed by many factors ranging from management practices as identified by Vaidya *et al.*, (2006), politics as found by Hyytinen *et al., (*2011), organization behavior as noted by Velnampy and Kamalarupan, (2009), technology as analyzed by Ngugi and Mugo (2012) and systems as examined by Bashuna (2013)

Ethical and corruption issues as found in a study by Matto (2017) are other factors, which contribute to procurement mismanagement. Yet, Njeru (2015) is another found out that supplies management, training and policies in the organization affect effective procurement practices.

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[1] See the CAG reports at http://www.nao.go.tz/category/cag-reports/

Generally, the above empirical works show limited focus on the influence of internal audits in procurements of goods, works and services in public sector, especially in Tanzania context. Investigations on whether effective internal audits can limit the pervasiveness of procurement errors, irregularities and frauds are scarcely and this course unknown between theoretical and practical value of internal audit in the organization (Dordevic and Dukie, 2015). None of the studies above has particularly addressed the contribution of internal audit on procurement assignments in Tanzania. This study has filled a significant knowledge gap and therefore forms the basis for this study.

1.4 Objective of Study

1.4.1 General Objective

The general objective of this study was to examine the contribution of the internal audits on the effective Procurement assignments in selected mainland Tanzania Local Government Authorities.

1.4.2 Specific Objectives

The study was guided by the following specific objectives;

(i) To establish competencies of internal audit function in carrying out the effective procurement assignments in mainland Tanzania's LGAs

(ii) To assess the appropriateness of internal auditing procedures on effective procurement assignments in mainland Tanzania's LGAs

(iii) To evaluate the extent of independence of the internal audit function for executing effective procurement assignments in mainland Tanzania's LGAs

1.5   Research Questions

The following questions guided the study:

(i)   Are internal audit functions competent to carry on the effective procurement assignments in mainland Tanzania's LGAs?

(ii)   Are internal auditing procedures appropriate to ensure effective procurement assignments in mainland Tanzania's LGAs?

(iii)   Is independence of internal audit function sufficient to perform effective procurement assignment in LGAs?

1.6   Significance of the Study

This study is significant in two ways: First, it is significant to the government, policy makers and other stakeholders. Second it is significant theoretically. In term of the first significance, it is expected through the study, the government and other stakeholders will be able to know whether internal audit function is effective to support procurement assignment in LGAs. The stakeholders can know factors affecting internal auditing in relation to effective procurement assignment in public entities. The study has revealed the strengths and weaknesses of the existing status of auditing in Mainland Tanzania Local Government Authorities. It is therefore expected that LGAs stakeholders to take the necessary actions to improve the procurement activities, especially IA activity.

Internal audits serve a very important purpose in fostering confidence and in reinforcing trust in information, especially in procurement processes. The importance of procurement audit is confirmed by enactment of public finance and procurement

Acts of 2001(URT, 2001). The said laws established the internal audit function. The laws require IA to audit and report on procurement process and outcome.

The Principal-Agent and the Owner-Manager relationships as provided in the Agency theory and Stewardship theory are crucial in understanding how the internal audit has developed. Agents are appointed by principals and are delegated some decision-making authority to them. Likewise, managers are employed by the owner to take care for his or her business interests. In so doing, principals and owners place trust on the agents and managers to act in the principals' and owners' best interests. Even though, as a result of information asymmetries between principals and agents and differing motives, principals may have insufficient trust in the agents and may therefore need to put in place mechanisms, such as the IA to reinforce this trust.

Both the Agency theory and the Stewardship theory are among the governance theories; both theories are of accountability, which assist to explain the impact of internal audit in procurement. This study was set out to provide a context for the effectiveness of internal audit (also as an agent and manager) on procurement assignment.

Theoretically, the study adds knowledge to readers and professionals that will enable them to understand better, how internal audits can facilitate effective procurement assignments. The study contributes to the Agency theory, specifically on the internal audit procedures in the provision of information on procurement assignments in LGAs. The procedures will enable the internal audit to provide constant and effective review of procurement system and activities.

Effective internal audit procedures on procurement assignments enhance and stimulate both independence and competencies of internal audit for which effectiveness of IA can be attained. Internal audit procurement assignment is seen and being effective if its results goes with its objectives (Mihret and Yismaw, 2007). For the purpose of this study, internal audit effectiveness refers to ability of internal auditors to achieve the established objective within the LGAs (Badara and Saidin, 2012).The study is also for the accomplishment of the degree of the Doctor of Philosophy of the Open University of Tanzania.

1.7   Scope of the Study

This study examined the key variables (independence, competency and procurement audit procedures) that affect the quality of internal audit activity that describe the contribution of internal audits on procurement assignments in mainland Tanzania. The people bearing a procurement function and the stakeholders were the key interest population. The researcher was interested with quantitative techniques, which utilized a survey method to achieve the study objectives.

The study dealt only with a sample of the Tanzania mainland local government authorities (LGAs). The LGAs are not a union matters, so each part of the union has its own LGAs structure and policies.

1.8   Organization of the Study

The study is divided into six main chapters. The first chapter introduces the study. It provides the of the study, statement of the problem, objectives of the study, research questions, significance of the study and scope of the study as well as background the

organization of the study. Chapter two depicts the review of literature on the topic under study. It is made up of conceptual definitions, theoretical literature review, empirical literature review, research gap and conceptual framework of the study. Chapter three constitutes research methodology with various research instruments and measurements. A pilot study was undertaken by a researcher before the research design and approach, after which several tests and analysis were performed. Chapter four compromises the presentation of findings of the study using various tests and analysis. Chapter five is the discussion of findings based on the research objectives as were formulated/conceptualized in chapter one of the study. Lastly is chapter six, which specifically is for the conclusion, and suggestion for further study areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter provides a review of related literatures. It explains the conceptual definitions, review of relevant theories, and empirical review on previous works on procurement, procurement audit and related subjects. It also delineates the conceptual framework of the study.

2.2 Conceptual Definitions

This section defines key terms, which was used in the study. These terms are procurement, procuring entity, procurement assignment, procurement policies and law, procurement cycle management, internal auditing, and legislations and ICT.

2.2.1 Effective

Joesbury (2016), defines the term as something productive or capable of producing a result. This definition was been adopted in this study.

2.2.2 Effectiveness

Effectiveness is the degree to which something is successful in producing a desired result, is results driven. Effectiveness is the ability of the organization to exploit its environment in the acquisition of scarce and valued resources to sustain its functioning. Effectiveness is linked with improvement and value orientation, it relates to the results of the activity (Joesbury, 2016). This definition was been adopted in the study in hand.

2.2.3 Procurement

According to the Tanzania public procurement Act of 2011, Procurement refers to buying, purchasing, renting, leasing or otherwise acquiring any goods, works or services by a procuring entity. It includes all functions that pertain to obtaining of goods, works or services. According to Kidd (2005), Procurement is the business management function that ensures identification, sourcing, access and management of the external resources that an organization needs or may need to fulfill its strategic objectives.

The Kenya public procurement and disposal Act (2005), has defined procurement as an acquisition by purchase, rental, lease, hire purchase, license, tenancy, franchise, or any other contractual means, of any type of works, services or supplies or any combination. Procurement encompasses the whole process of acquiring property and/or services (Republic of Kenya, 2005).

The Stockholm University (2009) defined procurement as the measures that are taken by a procuring authority in order to award a contract or enter into a framework agreement regarding goods, services or construction contracts. The PPA definition is the one to be used in this study; this is so because the study is being done in the Tanzania environment.

2.2.4 Procurement Laws

Procurement laws are the principles and procedures to be applied in any procurement held by authorities and institutions governed by the laws (Republic of Turkey, 2012). Njeru (2015) defined the Procurement laws as Acts, rules, regulations and procedures which governing procurement processes in an organization.

Dorsett and McVeigh (2007) refers a law but not to procurement law as a rule of conduct or procedure established by custom, agreement, or authority, which is binding to the people. The law act as guideline as to what is accepted in the society. Without the law, there would be conflicts between social groups and communities.

Fuller (1969) did not define the term procurement, but defined law as certain moral standards, which he calls "principles of legality", are built into the very concept of law, so that nothing counts as genuine law that fails to meet these standards…he, contents that the purpose of law is to subject "human conduct to the governance of rules". The Tanzania public procurement Act of 2011 did not define the word procurement law. Since Njeru (2015) study is from the East Africa countries (Kenya), his definition will be adopted in this study.

2.2.5 Internal Auditing

The term internal auditing has been defined by IIA (2016) as an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

In respect to procurement, it refers to an activity in a procuring entity responsible for the execution of the audit functions by helping an organization to accomplish its objectives by bringing a systematic, a disciplined approach to evaluate and improve the effectiveness of procurement activities (IIA, 2016).

2.2.6   Internal Audit Competency

A competency refers to the ability of an individual or group of individuals to perform a job/task properly. It is also being a set of defined knowledge, skills and behavior (Arena and Azzone, 2009).

IIA (2018), defined internal audit competency as a series of activities designed to enhance the likelihood that public sector internal auditors collectively achieve the knowledge, skills, and other competencies necessary to support their respective audit activities as their capabilities progressively evolve. Because this study involves IA as a unit, the first definition was adopted for the study.

2.3   Theoretical Literature Review

Theoretical literature outlines the relevant theories on which this study was based and guided. This study will be guided by the Agency theory in collaboration with the Stewardship theory, which are sub-sets of the governance theories.

2.3.1   The Agency Theory

Agency theory roots can be traced to the 1960s, when economists started exploring risk sharing (Eisenhardt, 1989). The theory seeks to provide explanations on the way the apparent chaos of conflicting objectives is organized and brought to equilibrium to maximize the value of the entity (Jensen and Meckling, 1976). The theory, in different times has been cited in the studies such as Pinto (2015) on the impact of procurement practices in the municipalities' study, Njeru (2015) in his study on the factors affecting effective implementation of procurement practices and Kapaya (2017) on capital structure variability of the firms listed on DSE.

The Agency theory brings a contract of two parties; the one, which delegates task and need to be performed and the other who undertake the task (the performance). Internal audit is an agent who assures the principal on the use of resources and the principal is the government representing the taxpayers (i.e. citizens). The internal audit function is established and exists to monitor management activities and to attest the performance of management, procurement assignments included. The monitoring cost (the internal audit assignments in procurement) is an example of an agency cost and it must be cost effective (Colbert and Jahera, 1988).

Each party in the contract possesses different goals, resulting to outcomes that may be in conflict, and invited different feelings toward risk. The different goals and feelings (attitudes) toward risk are aligned through the Agency theory. IA to be aligned to principal's interests, it must be motivated by being competent and independent when performing its audit assignments. Internal audit competency and independence are the paramount issues and are mechanisms which facilitate effective performance of the agent (Internal Audit) to assure the principal by a way of giving feedback information (audit report), that resources are used effectively (Badara, 2017; Pinto, 2015). Basing on the internal audit report, the principal (Government) can make an informed decision.

It is through a strong monitoring activity (internal audit function) will be a good internal oversight organ on the use of resources leading to effectiveness and better performance of the entity as a result no loss (Pinto, 2015). Generally, it is not possible for the agent without being effective to give right report (information) to make optimal decisions. The Agency theory presents issues of goals conflict, risk and of

information asymmetry which resulted from a knowledge gap between a delegated agent and his principal. Due to the specialization of knowledge, an agent must have more and necessary information than the principal regarding the business (Fama and Jensen, 1983).

Because of being difficult for agent's behavior to be accompanied by principal (information asymmetry), there are two options for principal (Pinto, 2015). These options are one should invest in effective information provision or institute a contract with expected outcomes of agent's behavior. There is a platform within the public entities to ensure the availability of data and information. Financial data and information including procurement related are retrieved from within the entities on a monthly basis. The monitoring activity (internal audit function) in each of the entity is legally bound to supply relevant information to the principal and other stakeholders regarding procurement (URT, 2011).

Agency theory primarily has the purpose of ensuring the interests of the principal who is the shareholder, by building his or her wealth. The theory does not consider other stakeholders such as employees, customers and the society at large. By not considering other stakeholders rather than principal's interests, monitoring activity (internal audit) has not potentially minimized expenditure, complied with laws and being accountable for funds (Njeru, 2015). Because of its importance in the organization, IA must apply the appropriate procedures when it performs the audit assignment, especially when is carrying on procurements assignments in LGAs. The information it provides is very crucial for decision making, especially in procurement (Etse and Asenso-Boakye, 2014). For the information provided by IA to be of

paramount in decision, IA must be competent, use proper procedures and be independent in reporting (IIA, 2016). To have and apply proper procedures by the agent, agent must collaborate with the outsiders (stakeholders) which is not the case of the Agency theory. The stewardship theory has been used in collaboration with agency theory to bring in the procedure as a variable in the study**.**

The Agency theory has several assumptions; first Principal and agent are motivated solely by self-interest. In addition, individuals are assumed to be rational and to have unlimited computational ability. Likewise, the contracts are assumed costless and accurately enforceable by courts. Along the same lines, agent is assumed to have private information to which principal cannot gain access without costs i.e. information asymmetry and the agent is usually assumed to be work averse and risk averse.

The Agency theory has some limitations. Among the limitations are ignorance of the organizational complexity and non-consideration of economic factors such as cultural, social and political, which affect organizations. Principals and agents each have their own interest which seen to maximize their utility (Jensen and Meckling, 1976) . In this study, the agent has to be motivated by independence, competence and proper and appropriate auditing procedures to provide the report, which will benefit the whole society, i.e. the shareholders and other stakeholders (Larson, 2013)

Procurement laws gave power to internal audits to provide relevant information. Asymmetry information can be improved by having internal audit, which is competent, independent, supported by management, and having appropriate internal auditing methodologies (procedures) which facilitate information flow to all parties.

As per assumptions in the Agency theory, internal audit is the monitoring and control activity ensuring goal congruency between the agent and principal, within, and outside the organization. To perform the assignment, internal audit activity needs to be independent when giving information. The information should come from competent activity and to be reliable information there must be specific procedures to be followed (IIA, 2018).

The Agency theory determines how procurement auditor's quality report is on behalf of the taxpayers. Existence of ineffective and uncommitted performance of the audit function leads to poor relationship between principal and the agent. Existence of conflict of interest in the part of agent leads to improper execution of procurement audit assignments and this leads to unchecked misuse of agent's resources.

2.3.2   Stewardship Theory

Stewardship theory is concerned with employment relationship between two parties, the owner and the manager (Davis *et a.l*, 1997; Madison, 2014). In the theory, the owner is referred to as principal and the manager is referred to as the steward. In this study internal audit function (internal auditor) is regarded as a manager, the taxpayers, is represented by the government as the principal.

The theory is regarded as a new concept (Larson, 2013) and presumes that the manager is a steward of the business with behaviors and objectives adhering to that of the owner. Stewardship theory advocates that the entity's aim is to contribute to humanity by serving stakeholders in needs such as customers, employees and community at large (Karns, 2011).

The theory centered on the principle that the business exists to serve not necessary for profit. Nevertheless, the entity to be able to serve, it must be able to sustain economically and hence theory promotes efficient and effective use of resources i.e. strive to value for money through working with stakeholders. Internal audit function (internal auditor) being one of the stakeholders need to be competent, have the appropriate audit procedures and be seen independent to safeguard the interest of the principal.

The stewardship theory concentrated entity theory aligns itself with the needs of community (taxpayers) and through risk taking and renovation, strive to improve the life of citizens (taxpayers) by ensuring that goods, works and services are made available to them making advantage of a business approach (Karns, 2011).The auditors (managers) of the entity (LGA) should not be motivated by personal needs and desires, but should see themselves as stewards with the motif and objectives as the principal i.e. the government (Larson, 2013). The managers in the entity (LGAs) need to maintain integrity, justice to the principal and respect the core of the entity (accountability, integrity, reliability, valued, respected and treated fairly) and serve as per described laws and regulations.

Maximum entity (LGA) performance, such as effective use of resources in procurement is the desired outcome of the stewardship outlook (Tosi *et al*, 2003). The theory argues that this outcome is attained when both the principal and the manager in the employment relationship choose to act as stewards. At the center of the theory is the assumption that the owner and manager relationship is based on a choice. When each part to the theory chooses to act as stewards and assigned himself or herself in

the position of the principal's interest first, theory advocates a positive effect on the performance (Madison, 2014).

The internal audit function (auditor) has a responsibility to align its behaviors with the objectives of the principal (the government/taxpayers) for ensuring that the LGAs use public funds acquiring goods, works and services in accordance to the procurement laws. To fulfill the responsibility auditors must be effective by being competent, use appropriate procedures when performing his assignments and performing the assignment independently.

The Stewardship theory is significant in explaining internal audit because is mainly interested with identification of situations in which the interests of the principal and the manager are aligned (Badara, 2017). Internal audit is existing as result of stewardship theory. Procurement auditing assignments enable appropriate stewardship reporting. Attainment of effective procurement assignment in LGAs will ensure better achievement of government/ principal's activities. Therefore, if audit unit did well its principal will also do well in serving the citizens by providing right products with the right costs. The theory shows that internal audit units (auditors) can be a steward facilitating the attainment of the local government authorities' objective(s) through the influence of competency, procedures and independence of internal audit variables (Hernandez, 2012).

2.3.3 The Summary of the Relationship Between the Agency Theory and the Stewardship Theory Regarding IA

Both theories are based on principal –manager employment relationship, and they give detailed of the behavior of the parties. Both theories attempt to address the same

outcome entity/firm performance (Davis *et al*., 1997; Fama and Jensen, 1983 ; Tosi *et al*., 2003). Agency theory states that increased performance is the outcome of the principal executing governance structure to make restriction on the opportunistic behavior of the agent, based on the assumed economic model of man. The purpose of business is to build shareholders (the government) wealth.

The Stewardship theory advocates increased performance is the outcome of the principal encouraging a governance structure that empowers and motivates pro-organizational behavior of the steward (auditor), based on the assumed humanistic model of man. Stewardship theory purpose is to promote the well-being of the society.
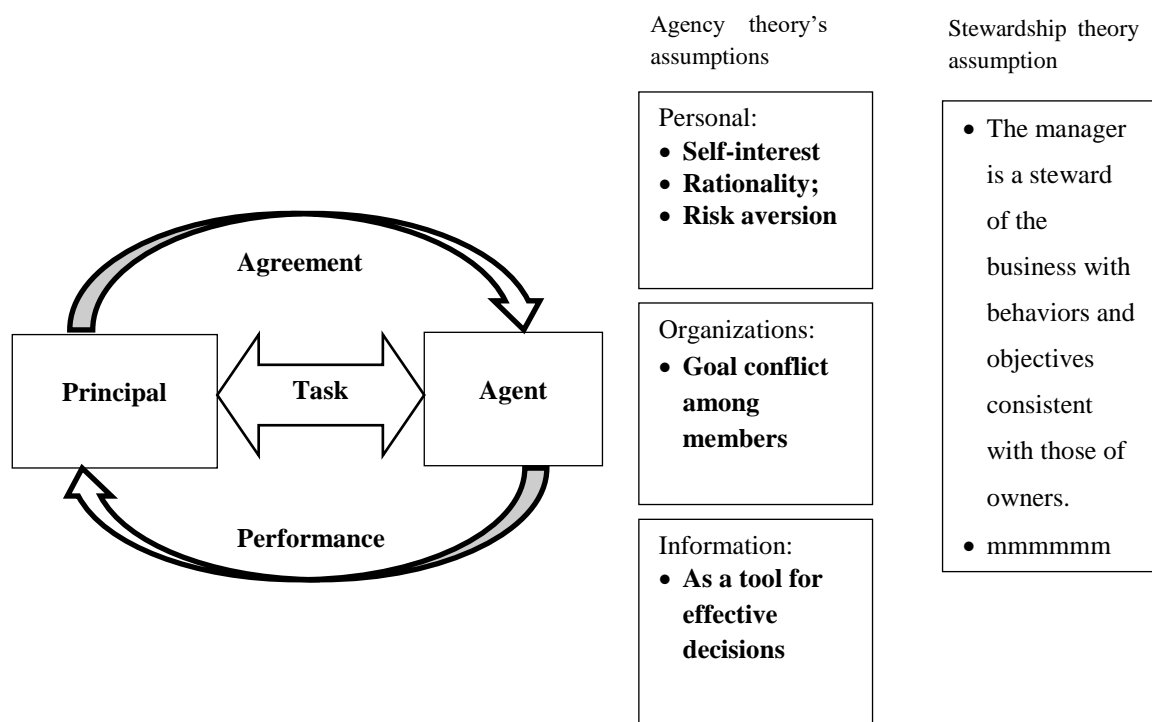
Figure 2.1: Agency and Stewardship Theories

This study was guided by Agency theory (IA independence and IA competencies Variables) and stewardship theory (IA procedures). These theories are appropriate useful for studying the contribution of internal audit on effective procurement

assignments in LGAs. They support theoretical framework for the study of the audit function. They help to explain and predict the existence of internal audit, but they also help to explain the contribution of internal audit to procurement assignments.

2.4   Laws Regarding Public Procurement

Laws are some of the factors influencing service delivery in the procuring entity. The Tanzania procurement laws demand an involvement of internal audit function in procurement processes (URT, 2011). Procurement laws are legislations that are set in place to govern procurement process needed by the entity to function well (Njeru, 2015; Njeru, *et al*., 2014). The process seeks to minimize costs associated with the procurement (Njeru, 2015).

The benefits of procurement law in the entity are keeping the costs in line and in a clear manner, defining how procurement will be done (URT, 2011). Procurement law will be adjusted as the needs arise to accommodate the new circumstances. The public procurement system in Tanzania has been undergoing consistent reforms due to the global trend since 1986 (Nkinga, 2003). The law provides for internal auditing as a mean to achieve desired performance, reduce losses, and hence value for money. Procurement audit analyses legal requirement. To achieve the requirement audit function need to be competent, independent and possesses appropriate procedures in carrying audit assignment, (Etse and Asenso-Boakye, 2014; URT, 2011).

The Public Procurement Act (PPA), for the first time was enacted in 2001 to give out procedures for public procurement. The Act established the organs to facilitate effective procurement. Among the organs established by the Public Procurement Act,

2011 as oversight are internal audit unit, Public Procurement Regulatory Authority (PPRA) and Public Procurement Appeal Authority (PPAA). Within the entity accounting officer, procurement management unit, tender board, receiving and inspection team, negotiation team and evaluation committee have been established to facilitate the procurement.

The oversights established are internal control that ought to be evaluated by internal audit function. Internal Audit (IA) functions to be effective need to be competent, independent and have adequate and appropriate procedures in procurement assignments. All these three elements in IA function are to be coordinated by staff; hence staffing level is of paramount important. Staffing level is needing the right persons as employees in the right place at the right time. It refers not only having enough staff, but also ensuring that the staff has suitable knowledge, skills and experiences to handle task safely and effectively (IIA, 2018).

Understanding how procurement laws operate is vital for internal audits to contribute effectively in the organization performance. This was testified in the study conducted by Njeru (2015) on factors affecting procurement practices in Kenya. Procurement laws were identified as one of factors influencing service delivery in the procurement entity. Internal audit activity being an entity's tool for the law's compliance was not given attention in the study. In the study, likert scale questionnaires were used to collect data and multiple-linear regression model was used to analyses the data.

2.4.1 Competence of Internal Auditors in Public Procurement

The main objective for auditing public procurement is to ensure that procurement activities are done in a way of attaining value for money within the provision of

procurement policy (URT, 2001, 2011). To achieve competency in procurement audit, training for specific issues should be provided to internal auditors. Internal auditors who are competent will have all skills necessary to give out information in the form of a good audit report (Shamsuddin *et al.*, 2014). Internal audit standards (IIA's) require that to be proficient, an internal auditor must have the correct skilled set, knowledge and other competencies in the area of the assignment.

Understanding the procurement policy and having the necessary IT skills when performing the audit function is one of the needed requirements not only to be a competent but also to be seen a competent (IIA, 2018). IA function should have multidisciplinary skilled staffs. Knowledge of procurement law, IT and others is of paramount important (Bailey, 2010; Njeru, 2015). Skilled set to members of the audit function is a must for competencies required to perform procurement assignments. The corresponding hypothesis used in this study is *"There is a positive influence of internal audit competencies on effective procurement assignment in LGAs"*

2.4.2 Organizational Independence of Internal Audit Unit in Public Procurement
Both public finance Act, Act no.6 of 2001 and the professional practices framework adopted by Tanzania government, demand internal audit to be independent from those it audits. An activity intends to assist the management by assessing and giving feedback independently regarding procurement. The strength of internal audit activity is evaluated by looking to the level of independence it enjoys from the management and from operating responsibilities (INTOSAI). According to INTOSAI, another person, organization, or state defines independence as freedom from dependence on, or influence or control.

Whether internal audit established by legislation; whether it is accountable to top management; whether it reports both to top management and those charged with governance are criteria for independence. Another criterion is whether internal audit is located organizationally outside the staff and management function of the unit under audit. Yet, there are other criteria, which are whether is sufficiently removed from political pressure to conduct audits; and whether it has access to those charged with governance and the like.

Internal audit independence is well documented in the internal audit charter as described as the terms of reference. An approved internal audit charter serves a lot from why the function should have the charter, who is responsible for the charter, what should the contents of the charter be to the conclusion of the internal audit charter (Chartered IIA, 2019). Independence in the circumstance of this study means to be free from the influence of the external such that internal audit activities can be undertaken smoothly without any fair (Belay, 2007). The corresponding hypothesis used in this study is *"There is a positive influence of internal audit independence on effective procurement assignments in LGAs"*.

2.4.3 Internal Audit Procedures' on Procurement Assignments

The internal audit function, which needs to seek compliance on procurement law in the organization, must be conversant with procurement cycle. The procurement cycle is the cyclical process of key steps when procuring goods, services or works. This is an interactive tool, which has been developed to guide members through the procurement process with links to relevant knowledge to support one in every step of the way through the procurement journey.

According to URT (2011), procurement cycle comprises procurement planning, requirement definition, tendering of sourcing, evaluation and selection, contract award and contracting management. Unless internal audit considers procurement processes and procedures as stipulated in procurement policies, there is a danger of having undesired audit results. Internal audit must monitor and report procurement assignments to ensure that inconsistencies or irregularities in the procurement process are identified immediately and resolved to support a fair and open procurement process (Etse and Asenso-Boakye, 2014).

The corresponding hypothesis is: "*There is a positive influence of internal audit procedures on effective procurement assignment in LGAs*"

2.5 Empirical Literature Review

In Tanzania, there is scanty empirical evidence on internal audits contribution on procurement assignments. Some of the studies that have dealt with procurement assignments (practices) in the world include the study by Pinto (2015). Pinto in his study on the impact of procurement practices in the municipality auditing market in Portuguese, collected data through questionnaires and the Probit regression model was used to examine them. The variables in the study were audit quality, audit fees, audit time and accountant attitude.

The Pinto's study concluded that many municipalities raise reasonable doubts about procurement procedures and other compliance with public procurement Act (PPA), and audit quality. Although the study dealt with audit issues, but issues concerned with the contribution of internal audit function in procurement processes, specifically

its independence, competencies and audit procedures were not clearly stated in the study.

In another study by Makabira and Waiganjo (2014) on the role of procurement practices on the Performance of Corporate Organizations in Kenya, descriptive design model based on qualitative data was used to analyze the data that collected through structured questionnaires. The study, which based on the government department, concluded that in Kenya National police service, planning decision is undertaken when purchasing is done.

The independent variables in this study were procurement planning, procurement controlling, and procurement monitoring (internal audit included) and training, while dependent variable was performance. The study did not consider the issues of internal audit competencies, audit procedures and the independence of audit activity within the entity, which this study is expecting to take into consideration.

The study conducted by Mokogi *et al.,* (2014) on the effect of procurement practices on the performance of commercial state-owned enterprises in Nairobi Country, Kenya. The study used descriptive model to analyze the data. The Independent variables in the study were buyers-supplier's relationship, supplier selection procedures, organizational capacity and procurement process management. The study found out that the independent variables enhance the performance of the organizations.

Vaidya *et al.*, (2006) conducted another study on critical factors that influence E-procurement implementation success in the public sector in Australia. The survey

questionnaires were used to collect data and the data were analyzed descriptively. The study identified end-user uptake and training, supplier adoption, compliance with best practice for business, systems integration, security and authentication strategy and technological standards as the variables. The study analyzed the relative importance of different critical success. The study found out that organization and management factors are the most important categories for the success of e-procurement initiatives. The study did not consider the influence of internal audit in E-Procurement, a gap that this study intended to fill.

In the same way, Velnampy and Kamalarupan (2009) carried out a study assessing the factors influencing effective procurement management system in public sector organizations in Sri Lanka. The variables in the study were financial, human resource and technology related. The variables were grouped into two factors that were organizational related factors and industry related factors. Research questionnaires used to collect sampling data and analyzed by regression model. The study found out that the public sector procurement management was ineffective in the selected region. Internal audits being comprised of human resource were not specifically analyzed in the study.

Bashuna (2013)n his study on the factors affecting effective management of the procurement function at Nakuru North sub-Country in Kenya adopted descriptive design method. In the study, a survey design method as approach of collecting data was used. Census technique and questionnaires were also used in the study. The study used SPSS to analyze both quantitative and qualitative data. The study concluded that Project financing accountability, ICT adoption, internal processes and internal control

system affect the procurement function. However, the study emphasized the legislative issues but did not indicate how legislative issues affect Procurement.

In the same vein, Mugo and Ngugi (2012) conducted a study to explore factors that affect procurement process of suppliers in the Kenya public sector. The study adopted a descriptive research design to analyze the purchasing process in the Health-care industry. The findings revealed that accountability, ICT adoption and ethics affected the procurement process of the health care supplies in the public sector largely. The study used regression mode to analyze the data and no weight was given to the effect of monitoring organ (IA) on procurement practices/assignments, a gap that this study intends to fill.

Badara and Saidin (2013) conducted a conceptual literature review on IA effectiveness in Nigeria. The study found that audit function is influenced by IA quality, the organizational link and management support. The study also revealed that auditing effectiveness is affected by professionalism, IA independence, audit experience and ethical orientation. The study recommended future studies on different variables affecting internal audit contribution, a gap that this study filled.

2.5.1 Internal Audit

Several studies have been done on internal audit function. The studies have not exclusively dealt with the contribution of internal audits on procurement assignments in public entities, specifically in Tanzania. In evaluating the strength of internal audit function, Obeid (2007), revealed that the objectivity of internal audit is affected by reporting level of internal audits. The variables in the study were strength of internal audit function, objective of internal auditors, and external auditors' reliance on

internal audit activity. The study used questionnaires to collect data and the data were analyzed by regression model.

In the study conducted by Cohen and Sayag (2010) in Israel, it was found out that management support is the main determinant of effective internal audit followed by organizational independence of IA. Variables in the study were: professional proficiency of internal auditors, quality of internal work, organizational independence, career and advancement, top management support. Questionnaires were mailed to 292 to get data and the data analyzed by regression model.

Baharud-din *et al,* (2014) conducted a study in Malaysia on factors that contribute to effectiveness of internal audit in public sector. The variables in the study were Auditors competencies, independence of auditors and management support to internal audit. Likert scale questionnaires were used to collect data; the data were analyzed by regression model. The findings showed the positive relationship among the variables.

Alzeban and Sawan (2013) carried out a study in Saudi Arabia on the role of internal audit function in public sector. Competence, independence and objectivity of internal audit function, management supports to internal audit function were among the variables studied. Other variable in the study were IA activity and interaction between audited and auditors.

Interviews were conducted and questions were built upon the general objectives of the study. The descriptive design model was used to analyze the data collected. It was found that institutional factors are likely to play a part in the failure of internal audit to

develop in the Saudi Arabia public sector. Ideally, internal audit to have strong influence and contribute positively in organization has to possess competencies, independence and be procedural as discussed here below:

2.5.1.1 Internal Audit Competence

Shamsuddin *et al.,* (2015) conducted a study to assess the perception of managers on effectiveness of the internal audit functions in Malaysia. The variables in the study were competence of internal audit, management support and the independence of internal audit. Data were collected through survey questionnaires and were analyzed descriptively. All three variables competence included proved to have positive correlation with the internal audit effectiveness. Internal audit activity to be competent would have all skills necessary to give out information in a form of a good audit report.

Understanding the laws (policy) governing procurement and having the necessary IT knowledge when performing audit function is one of the needed requirements not only to be a competent but also to be a competent (Njeru, 2015). A multi-skill (multi-knowledges) internal audit function tends to be more productive and competent. Keeping up to date with industry and regulatory changes and profession standards, must be considered in the performance of auditing.

A study by Plant *et al.,* (2013) in South Africa on internal audit competencies revealed that a mixed skill is of paramount important. Variables of the study were individual competency requirements and competency requirements for IA management. The content analysis model was used to analyze the study. Internal audit function should

be a multidisciplinary skilled staff. Knowledge including law, procurement policy and IT is of paramount important (Njeru, 2015).

Further, Matto (2017) is another study in local government analyzed the factors contributing to poor performance of procurement functions in Tanzania. The study found that there is weak internal control, lack of staff capacity and corruption in the public entities and specifically on Mainland Tanzania local government authorities. The variables in the study were: internal control, staff capacity and corruption. The study used the content analyzed model. One of the recommendations of the study was to strengthen internal audit unit. The study concluded that LGAs would not attain the effectiveness due to non-compliance of the procurement Act (law). Procurement law is one of the primary functions of procurement with the possibility of contributing the success of organization operation and improves service delivery.

In the study conducted in Kenya by Njeru *et al.,* (2014) it was found that procurement policies influence implementation of effective procurement assignments in the organization. Variables in the study were: low level of procurement regulations compliance, application of poor procurement policies, lack of management support, use of poor procurement procedures and lack of effective policy making process.

The study used descriptive research design model and defined procurement laws as legislations that are set in place to govern procurement process needed by the entity to function well. The process seeks to minimize costs associated with the procurement, the establishment of lists of suppliers and building reorder protocol that assist to keep inventories low without disturbing the operation function of the organization. To

guide the procurement function and reduce costs, all types of organizations whether large or small make use of procurement law.

The study conducted by Njeru (2015) cited Thai (2001), Pursglove and Simpson (2007) and George (2010) show that in China, only less than 30% of the organizations succeed in implementing effective procurement policies, in India and Malaysia, public organizations are missing effective procurement policies to support the implementation of maintainable procurement policies. It was also noted that in Africa, Public entities have ineffective procurement policies

2.5.1.2 Organizational Independence of Internal Audit

Shamsuddin *et al.*,(2014) conducted a study to determine the factors that determine the effectiveness of internal audit function in Malaysia public sectors. In the study, the independence of internal audits and other variables were examined. The study used semi-structured interviews for data collection and exploratory design model was used to analyze the data. The findings from the study showed that internal auditors' independence is still a dream.

Another study done by Arena and Azzone (2009) on internal audit effectiveness in Italy revealed that the internal audit effectiveness is influenced by the auditee (management). The study involved characteristics of internal audit unit, the characteristics of individual internal auditors and the organizational environment. Structured interviews questionnaires were used to collect data and the data were analyzed by Probit regression model. Their findings revealed the importance of

internal auditor competence and management consideration in the effectiveness of auditee.

Study by Cohen and Sayag (2010) showed that auditors should be sufficiently independent from those they are auditing that they can conduct their work without interference and equally important be seen to do so. Coupled with the objectivity, organizational independence has contribution to the accuracy of the auditors' work and provides employers confidence that they can rely on the results and the produced report.

The head of internal audit should report to the chief executive officer for assistance in establishing direction, support and administrative interface; and to the audit committee or equivalent for strategic direction, reinforcement, and accountability. Staff should be free to access records, personnel and design appropriate probing techniques with unnecessary restrictions.

The internal audit charter is the document that defines and displays the level of independence of the audit function within the LGAs. The charter describes IA's purpose, authority, responsibility and position within the entity. The charter indicates how the audit is providing value to the entity and the nature of the service to the organization. The IA charter contains the role and scope of work of the activity, objectives of the IA and the mission (the charted IIA, 2019).

Internal audit independence clearly defined in internal audit charter, which confirmed by the top management via the audit committee in the entity. The charter must state the way in which independence is established, maintained and requirements to be

confirmed by both parties i.e. auditee and auditor. Assurance of internal auditors to have unrestrictive access to records, personnel and physical property across to all activities in the organization (Peursem, 2005).

According to O'Regan (2002), it can be concluded that IA charter is important document, it shows how internal audit issues such as planning, quality assessment, and approval of activities, responsibility of both auditee and auditor, and other many are being taken care. More explanations on the internal audit charter have been given by the Chartered IIA (2019) and Morrow and Pator (2007) who all emphases on importance of the charter.

2.5.1.3 Internal Audit Procedures on Procurement Assignments

A case study conducted in Ghana (Etse and Asenso-Boakye, 2014) to explore public procurement audit process in practice. The questionnaires were used for data collection while fifty (50) institutions were involved, data were analyzed descriptively. It was revealed that lack of knowledge of the method and process of undertaking a procurement audit has the danger of sub-optimal achievement. It was also found that in a procurement audit, the use of poor auditing process has the risk of entertaining weak and corrupt procurement assignment in place because the auditing cannot discover and report them.

The study carried by Pinto (2015) in Portuguese used multiple-regression model to analyze data. It was found out that, due to the improper procurement audit methodologies, other risks such as waste of public resources, lack of accountability and failure to comply with procurement policy may occur. It is recommended that a

risk- based in planning and executing audit work be employed on auditing of the procurement management.

Studies conducted by various authors adopting descriptive design and analyzed the data by regression model revealed that suppliers who are the part to procurement processes are key stakeholders in any organization. They form a key component in the success or failure of the procurement. Therefore, there is a need to effectively manage the suppliers (Kiplagat and Kiarie, 2015). Management of suppliers is a business activity which allow an organization to adequately pick out its vendors and negotiate the best prices for goods, services or works that it procures (Njeru *et al*., 2014).

It is stated that supplier management is a discipline of working collaboratively with those suppliers that are vital to the success of one's organization to maximize the potential value of that relationship" (Basheka and Bisangabasaija, 2010). It is from suppliers, the entity (buyer) gets right price, quality and quantity and from the supplier the delivery in time can be made possible.

The relationship of supplier and procuring entity creates a common frame of reference to facilitate effective communication between an organization and vendors who use different business assignment and terminology. In Procurement, because of good supplier-buyer relationship, there is an increase of good control and oversee of inventory and stock and processing material (Pagh and Cooper, 1998). Where suppliers are involved in product development, they will allow the entity to make the best use of them in capability and technology and products will be of competitive (Njeru, 2015).

Studies adopted descriptive research design, structured questionnaires with regression models in various countries emphasis the involvement of internal audit as an important element of internal control system. Due to ineffective of internal control audit included in USA and Kenya, effective supplier management strategies are lacking in public institutions including local authorities. This leads to negative cost-effective implementation of procurement assignment (Findlay, 2009; Makabira and Waiganjo, 2014). In the study, factors such as lack of supplier collaboration, poor supplier appraisal techniques, poor supplier selection process, and lack of effective supplier performance rating methods, missing of supplier relationship management, weak supplier selection strategies and non-availability of supplier development were noted.

In one study, it was concluded that management of suppliers is the business process, which allows an organization to a satisfactory select its suppliers and negotiate the prices that are best for goods, services or works that are procured (Njeru *et al.,* 2014). The people at the top of management in the entity monitor the supply chain of the Institution to ensure that suppliers are familiarized themselves with the entity's operating process and manufacturing activities. Internal audit has a role of ensuring that the processes of acquiring the suppliers (supplier's management) are controlled and providing assurance to authorities that processes are efficient and effective (Hermanson and Rittenberg, 2003).

According to Krasniqi (2012) the objective of having procurement procedures as stated in procurement policies is to make sure that there is efficiency, transparency and fair bases for public funds use. Public entities have a duty to provide goods and

services of the appropriate quality and at a competitive price. Procedures, which create fair opportunities, have been provided by procurement policies and they intended to bring value for money to both the respective entities and their stakeholders.

The procedures are expected to do away with risk of corruption and favoritism hence encourage a favorable competition among the participants. As a result, where there is a compilation of the procurement procedures the procurement legislation, minimization of procurement costs, procurement of right quality and quantity of goods and service with right time is also possible. This being a situation in the public entities, no matter what there must be value for money for goods and services acquired by the entities.

Internal audit function needs to have staffs that are competent in procurement assignments, meaning that they must conversant with the procurement laws. Kontogeorgis (2018), found that internal audit function is a vital for the success of the organization's operations, procurement activities included. For the purpose of procurement audits' assignments, as it is urged by (Krasniqi, 2012), audit function's staff must be competent with the procurement stages in the process(the series of steps). The series of steps in Procurement process is referred to as procurement cycle (Gopi, 2019).

Procurement cycle comprises: procurement planning, requirement definition, tendering of sourcing, evaluation and selection, contract award and lastly contract management (Mwandobo, 2013). According to Sarkar (2015), contract management includes all administrative matters in relation to the contract, financial, managerial and technical assignment to be performed by the procuring entity from contract award

until the contract successfully completed or terminated or up to settlement by payment or until disputes or (claims if any) are settled. All steps of the process (cycle) are vital for effective procurement since dropping or ignoring even a single step attract a procurement problem (Joesbury, 2016).

To be sustainable and get its value, the entity must set a forecast and programs for its future business. Procurement planning is one and the crucial stage in procurement processes. Procurement planning is the process of identifying and consolidating procurement requirements with timeframes. Procurement plan should be analyzed into preliminary procurement plan, final procurement plan and be linked with budget preparation and determined by funds availability.

According to Makabira and Waiganjo (2014), procurement cycle bring accountability for the public resources by establishing internal checks and controls in procurement process. Public entities benefit from procurement cycle procurement controls that ensure the attainment of value for money meaning that it facilitates the proper use of public funds. The separated activities in procurement cycle i.e. planning, requirement definition, tendering, evaluation and selection, contract award and contract management all these are summed to internal control in procurement cycle.

Mugo and Ngugi (2012), in their study argued that the procurement activities (procurement cycle), in this case procurement audit should be carried on by qualified men and women. Men and women who are qualified will enable a sound procurement policy and practices and hence facilitates good governance in the organization. Good governance in public entities facilitates accountability, which create value for money.

The effective procurement assignment in the organization is the results of a strong procurement cycle manned by qualified personnel.

2.5.1.4 Staffing and Training

Both staffing and training are important and play crucial role in bettering the performance of individuals and the organization as a wholly. Kim and Ployhart (2014) conducted a study in USA to assess the effects of staffing and training on firm productivity and profit growth. The study showed that staffing and training are key resources to achieve any assignment for bettering the organization and they influence performance. The study involved three variables, which were training, staffing and productivity (performance).

According to Salah (2016), the success or failure of internal audit function depends on the number of staff and the quality of the audit staff i.e. human resources the internal audit has. An appropriate number and well-trained internal audit function's employees are thought to be corner stone for success of the activity. Training on internal audit is a vital and it should be required to cover the necessary work-related skills, techniques and knowledge on relates assignments.

Vinesh (2014), argues that an appropriate staffing and training addresses employees' weaknesses, improve performance, bring consistence in duty performance, ensure staff satisfaction, change positively productivity, change positively the quality of services, make possible reduction in cost and enable reduction in term of supervision. The above studies including Kim and Ployhart (2014) study, which used descriptive research design and employed random coefficient growth models to analyses the data,

showed that internal audit is most effective when its resource level, competence, and structure are aligned with organizational strategy and it follows standards.

2.6   Effective Procurement Assignment

A study was conducted in Kenya by Njeru (2015) to explore the factors affecting the implementation of procurement practices in public training in Kenya. In the study independent variables were five and effective procurement practices (assignment) being a dependent variable. The independent variables groups were procurement policies, inventory management, supplier management, training and ICT. In his study, he used structured questionnaires to collect data and analyzed the data by regression, model. He defined effective procurement assignment as the systems that giving a high level of accountability and value for money in the use of procurement budget.

A study conducted by Kiplagat and Kiarie (2015) in Kenya to analyze the effect of suppliers' management practices on supply chain, did not show how internal audit activity could be involved to attain the effectiveness.

The independent variables in the study were supplier identification, supplier selection and evaluation, supplier relationship management and supplier performance measurement. Data collected through questionnaires were analyzed by using linear regression. The study's findings emphasized on the supplier selection and identification practices.

All parties in procurement system must have a stake in promoting and facilitating this important part of good governance and by so doing, there will be improvement of social and economic affair in the society. The low level of compliance with

procurement legislations leads to lower level of effectiveness in procurement assignment in public institutions. The results of the effective procurement assignment are compliance with procurement legislations, minimization of procurement costs, accountability of procurement funds and quality of goods, works and services (Njeru, 2015).

Table 2.1: Summary of Empirical Literature

Variables	Country	Research Methodology	Findings	Authors
Professional proficiency, quality of internal audit work, organizational independence of internal audit, career and advancement and top management support.	Israel	Regression	Management support is the main determinant of effective internal audit followed by independence of internal audit.	Cohen and Sayag, 2010
Independence of internal audit, organizational environment, the characteristic of internal audit unit, the characteristic of internal auditors	Italy	Probit regression	Internal audit effectiveness is influenced by the auditees (top management).	Arena and Azzone, 2009
Internal auditors' competence, independence of auditors, and management support	Malaysia	Regression	There is positive relationship among the variables	Baharud-din *et al.*, 2014
Competence of internal audit, independence of internal audit, relationship between internal and external audits	Malaysia	Exploratory	Internal auditor independence is still a dream	Shamsuddin *et al.*, 2014
Internal audit competence, management support, and independence of internal audit.	Malaysia	Descriptive	There was a positive correlation of variables with the internal audit effectiveness	Shamsuddin *et al.*, 2015
Audit quality, audit fees, audit time and accountant attitude	Portuguese	Regression	The results confirm a negative association between the audit quality perception and the lowest price selection criterion.	Pinto, 2015
ICs, Staff capacity and Corruption	Tanzania	Content analysis	The internal control is weak, staff lack capacity and integrity	Matto, 2017

2.7 Research Gap

The literature review makes available various studies that have focused on internal audit and procurement in general, which were conducted in Africa and other parts of the world. The detailed examinations of these studies provide light in studying the contribution of internal audit on procurement assignments in the public entities.

Generally, studies on internal audit as a field have been done in general. Examples of studies are: (Baharud-din *et al.*, 2014; Cohen and Sayag, 2010; Ferry *et al.,* 2017; Shahimi *et al.*, 2016; Shamsuddin *et al.*, 2015) . The following are some in term of procurement: (Bashuna, 2013; Makabira and Waiganjo, 2014; Njeri. 2015; Vaidya et al., 2006; Velnampy and Kamalarupan, 2009).

There is little evidence on the specific aspects of the Contribution of Internal Audit on Procurement Assignments in Public Entities in general and, Tanzania. To the researcher's best knowledge, there is no evidence that a comprehensive study has been carried on the contribution of internal audit on procurement assignments in Tanzania local government authorities. Hence, the study aimed to fill this knowledgeable gap.

Procurement in the public sector demands accountability. The Agency theory provides means for control and information in procurement through the employment of internal audit. The information asymmetry in procurement assignments can be eliminated by the involvement of an improved internal audit services in the organization. This will be happened through the introduction of specific internal audit procedures in procurement assignment, which is a contribution to this study.

2.8   Theoretical Framework of the Study

This section discusses theoretical framework of the study. In conducting this study, a conceptual framework is developed from the Agency theory to show the relationship between the independent variables and dependent variable. In this study, independent variables are competency in procurement policies, auditing procedures in procurement processes and independence of internal audit activity; and the dependent variable is effective procurement assignment. The constructs and relationships between the variables are shown in the Figure 2.2.
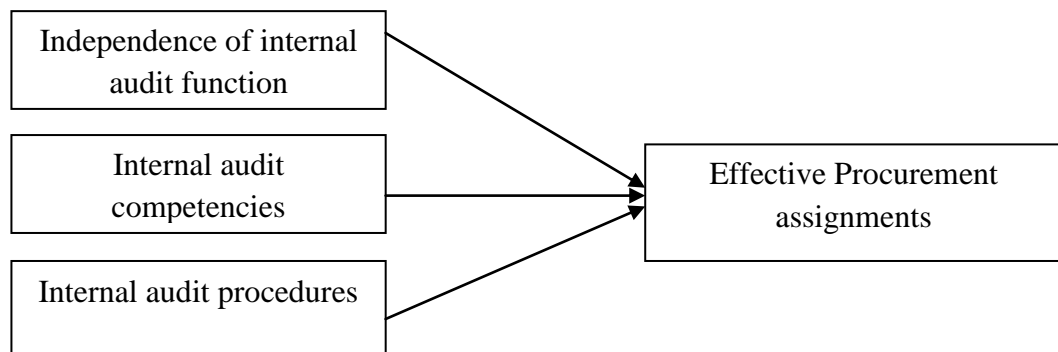
Figure 3: Theoretical Framework

Source: Developed from Literature Review (2019)

Figure 2.2: Procurement Assignment in LGAs in Tanzania Mainland

Effective procurement assignment (y) = f (IIA, IAC, IAP).

From the Figure 2.2, it implies that effective procurement assignment in public entities depends on how internal audit competency is on procurement assignment, how auditing procedures are on procurement assignment, and how the independence of internal audits is in any given procurement entity in public entity.

The dependent variable is effective procurement assignment that is affected by independent variables. Given such variables and factors of interest in them in

detecting their roles in procurement in public entities, multiple linear regression models with other quantitative techniques were employed.

2.9   Hypothesis of the Study

From the above literature review the following are specific research hypothesis that guided the study:

H1: There is a positive influence of internal audit competencies on effective procurement assignment in LGAs.

H2: There is a positive influence of internal audit procedures on effective procurement assignment in LGAs

H3: There is a positive influence of internal audit independence on effective procurement assignments in LGAs.

2.10   Summary of the Chapter

This chapter defined important concepts to be used in this study. The chapter also discussed the existing literature on procurement and factors affecting internal audit performance. After reviewing various studies by various authors, the researcher found the study gap. The study gaps found are on the contribution of internal audit on procurement assignments in LGAs. The next will cover the methodology on the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Chapter Overview

This chapter describes the methodological outlook that the study used. It consists the philosophy that guided the study then followed by the research design and the area of the study. Thereafter follows sampling frame, population of the study, sampling techniques, sampling size, variables and measurement procedures, data sources and data collection methods, validity and reliability of data, model specification, data processing and analysis, time frame and ethical consideration of the study.

3.2   Research Philosophy

This study was facilitated by a research philosophy. According to (Saunders *et al*.,2007) a research philosophy is the way in brief, which show how data about a phenomenon must be gathered, analyzed and used. According to (Mkansi and Acheampong, 2012), there are several types of philosophy, positivism being one of them.

The study makes the use of Positivism research philosophy. According to Greener and Martelli (2015), the only phenomena which known through our senses can bring out knowledge and normally it associated with empirical testing (scientific). The philosophy (positivism) supposes that the reality of objective exists and there is independence of human behavior i.e.; there is separation between the researcher and what is researched.

Aliyu *et al.*,(2014) state that positivism philosophy is regarded as a research strategy and approach, which is deeply established on scientific (ontological) principle and set of beliefs that the truth and reality is free and not influenced by viewer and observer. The philosophy is focused at stating the relationships over identification of the causes that effect the outcomes.

The use of the philosophy in this study is justified by the reality that the researcher tested the relationship between internal audit function independence, internal audit competencies, internal audit procedures on procurement assignment and the procurement assignments in public entities. As it was stated in Bouzanis (2013), the role of the researcher through this philosophy is limited to data collection and interpretation in an objective way.

Positivism philosophy generally is accompanied by a deductive approach and survey design, which enable a researcher to obtain data about practice at one point in time through questionnaires (Lancaster, 2008). The philosophy fit to the study as it was justified by other researchers such as (Pinto, 2015; Sefotho, 2015). In addition, the philosophy was justified in the conducted by Shayo (2018) on effect of entrepreneurial orientation on the Tanzanian firms' export performance.

3.3   The Area and Selection of Entities for the Study

The area of the study was Tanzania Mainland Local Government Authorities with 27 councils. The study involved all five Zones, which was adopted from the office of Controller and Auditor General. The Zones are: Coast, which comprises Dar salaam, Coast, Lindi, Mtwara and Morogoro Regions. Central that includes Dodoma, Singida

and Tabora Regions. Northern Highland with Kilimanjaro, Arusha, Tanga and Manyara Regions. Lake Contains Kigoma, Kagera, Mwanza, Geita, Simiyu, Shinyanga and Mara Regions; and Southern Highland which comprises Mbeya, Iringa, Katavi, Songwe, Ruvuma, Rukwa and Njombe Regions.

The researcher purposively included all zones but selection of regions with LGAs were picked randomly from 185 LGAs according to their ratios starting with city, municipal, district and then town councils, whereby names of the LGAs were written on pieces of paper. The researcher grouped the LGAs into four groups i.e. cities, municipalities, districts and town councils. LGAs in the study were picked from their groups randomly but considering the zones and the ratio of each group in LGAs, see Appendix III.

There were 27 LGAs with three oversight institutions i.e. Internal Audit General Office, Controller and Auditor Office and Public Procurement Regulatory Office in the study. As a result, LGAs and regions from five (5) zone as seen in Appendix III were picked for the study.

According to Kimario (2014), Local Government Authorities face challenges both in revenue collections and expenditure. Since over 60% of the government budget is channeled to local government authority, good use of public resources in LGAs will enhance the value for money in Tanzania's public entities. It's the role of internal audit function to ensure that there is value for money for goods and services acquired by the local government authorities, this fact motivated the study.

3.4   Research Design

This section sets out the tactic and procedures for research that involves the steps from side to side (wide) or broad assumptions to deep and detailed data collection methods analysis and interpretation (Galliers, 1991).

This study employed the quantitative analytical model. The quantitative research approach is used to analyse and interpret data, and to draw inferences from those data regarding the existing relationship. The quantitative approach enabled the examination of the relationship between independent and dependent variables (Saunders *et al.,* 2007).

According to Saunders *et al.,* (2007), the survey research fit this study. The researcher preferred a survey design because it seemed to be the best to answer the questions and serve the purposes of the study. The survey type of research is one that a group of people or objects is examined by gathering and analysing data from only a sample of people which represent the entire group, that is a portion of a population is studied and the findings are expected to be generalized to represent the entire population.

Likewise, the survey (cross-sectional survey) allowed and facilitated data collection at one point of time using structured interviews (Kothari, 2009). The cross-sectional field survey data obtained through questionnaire or interviews concerning practices or any situation were used to measure the variables of this study (Igwenagu, 2016)

3.5   Pilot Study

A pilot study is a preliminary study conducted by a researcher to assess statically variability of the data with the aim of improving the study design before the full-scale

study engagement. Before the actual study was conducted a researcher normally opts for a pilot study which involve fewer respondents with the relevant experiences in the field. The constructive feedback has to be drawn throughout the process which turns out to be of benefit to the researcher, the researcher uses the pilot study to make the necessary changes which automatically improve the research in its totality.

3.6 A Sampling Frame

This is a list of all those are involved in one way or another in procurement processes in LGAs. They are either consumers of procured services or they are parts of oversight persons or organs within which a population can be sampled and, in this study, include individuals from the whole mainland Tanzania. These persons have responsibilities on procurement processes. They either execute procurement and facilitate processes or oversee internal audit and procurement functions. Either they are consumers and customers of internal audit and procurement services.

These individuals are chief executive officers in local government authorities, Head of internal audit departments, Head of finance departments, Head of planning departments, Head of procurement units, Head of legal departments, Head of engineers, Head of human resources, auditors from internal auditor general's office, auditors from Controller and auditor general's office, staff from PPRA's office, chairpersons of tender board and chairpersons of audit committee.

3.7 Population of the Study

The interested population for this study was persons who are within mainland Tanzania having the interest with internal audit services regarding procurement

assignments in LGAs. LGAs in mainland Tanzania, comprise four types of councils i.e. cities, municipalities, districts and towns.

Since characteristics and structures of all four types of LGAs are the same save the differences in the number of people and the income of respective areas, the researcher purposively picked a population of 300 respondents obtained from 27 LGAs, National Audit Office with respondents, and Internal Audit General with respondents and PPRA with respondents. The respondents comprise the chief executive officers (CEOs), Heads of internal audit (IA) units, Heads of Human resources departments, District Engineers, District **treasurers**, Heads of legal units, Head of PMUs in LGAs, Chairpersons of Tender Boards and Head of planning units.

Offices of the controller and auditor general (CAG), public procurement regulatory authority (PPRA) and internal auditor general (IAG)' Offices are oversight institutions of public resources in which internal audit functions within the LGAs are auditing and reporting to. Hence, the staffs of these authorities were taken into consideration regarding the performance of internal audit function on procurement assignments.

3.8   Sampling Techniques

In this study, purposive and random sampling have been used (Teddlie and Yu,2007). The purposive sampling, which is non probability-sampling techniques, was used in the study. Judgmental sampling is an acceptable kind of sampling for a special situation like in mainland Tanzania's local government authorities (LGAs), where judgment of a researcher in selecting LGAs with a specific purpose in mind is necessary. LGAs differ in term of their categories. To reduce this difficult of

inequality, and to reach population needed a judgment sampling is the best. However, all types of LGAs basing on the Zones i.e. City, Municipal, District and Town councils and the respondents were picked in this study, basing on their ratio in the population.

3.9 Sample Size

A sample size calculator to have an appropriate and suitable sample size was used. In this regard, sampling technique was applied with respect to the unit of analysis that is the population in the study. As a result, a survey system approach formula was adopted from Taherdoost (2017):

$$SS = \frac{Z^2 * (P)(1-P)}{C^2}$$

Where:

Z= z value (confidence level)

P=percentage picking a choice, expressed as decimal

C= confidence interval

The suitable sample size of a population of 300 people at a confidence of 95% with confidence interval (margin of error) of 1% is 291. This sample size of 291 is large enough to allow a valid analysis of the study. The same characteristics in the same sample represent the population and the sampling error is minimized.

The uniqueness of this sampling formula is that it provides the possibility of scrutinizing small and special population groups and facilitates acquisition of information on the study area. The approach is justified; since data that were gathered

through this approach eliminate biasness and represents almost all individuals' opinions in the study population on the study problem (Orodho, 2009).

Results obtained from this study with the technique are more representatives accurate and reliable than results obtained from a sample with the less **Z** and higher **C**, so this justifies the use of technique (Field, 2009). A true measure of the population is provided by the approach, this is so because sampling error is reduced and a lot of information with facts about the study problem within the population is likely to be collected (Sekaran and Bougie, 2016). The population was stratified in groups depending on the type of the entity. The four strata that are City councils, Municipal councils, District councils and Town councils were adopted.

3.10   Variables and Measurements Procedures

Measurements for assessing the contribution of internal audits function towards achieving effective procurement assignments were adopted from PPRA performance and score sheet, IIA's operations manual and The International Standards of Supreme Audit Institutions (INTOSAI). PPRA performance and score sheet is a document used to assess the procurement performance of the entity. The document contains indicators, criteria, checklist, performance data and score. IIA's operations manual is a document prepared by the IIA as the best practice.

Over time, several activities, procedures and processes have been developed and, upon introduction have been found to be very successful and generally accepted as a valuable tool for assessment of internal audit activity. The internal audit staff ought to be knowledgeable on the subject matter with appropriate number of employees. The

function must have appropriate and adequate working tools. In terms of internal audit procedures on procurement assignments, the internal audit function must assess procurement assignments. The assessment is on the selection of the suppliers, Price negotiation, delivery schedules (compilation time) and delivery in terms of quality and quantity.

On the issue of the Organizational independence of internal audit function, the assessment on programming independence, investigative independence and reporting independence must be done. The more independent the internal audit function is, the better the function is. The best practice demands that audit function establish and maintain the internal audit charter and be supervised by independent audit committee.

Table 3.1: Operationalization of the Research Variables

Variable	Indicator	Sources	Instrument
Internal audit competency on Procurement assignment	• Compliance with procurement legislation. • Availability of Multi-skilled staffs/consultants • Auditors' attendance in training frequently. • The use of proper Procurement methods.	PPRA performance and score sheet	• Questionnaire
Internal audit procedures on procurement assignment	• Procurement cycle and Suppliers' selection procedures • Price negation • Adherence to delivery schedules • Delivery of the right quality • Delivery of the right quantity • Payment of suppliers in agreed terms	PPRA score sheet	• Questionnaire
Internal audit independence	• Reporting level • Limitation of scope • Internal audit charter • Top management support and approval	IIA operation manual and INTOSAI	• Questionnaire
Effective procurement assignment	• Compliance with procurement laws • Minimization of procurement (Expenditure costs) • Timely acquired of goods and services • Required goods and services.	PPRA	• Questionnaire

Source: Adopted INTOSAI and PPRA performance and score sheet

3.11   Data Sources and Data Collection Methods

Data are vital for any research; although researches are conducted in different fields of study only methodologies are different, but every research is based on data, which are analyzed then interpreted to give information. The researcher needed and collected both primary and secondary. Data collection procedure can be defined as the set of activities of gathering pieces of information that are crucial for research process.

3.11.1 Primary Data

The data collected by the researcher as the firsthand information from the sources is what termed as the primary data. Primary data display the real information that was obtained for the sake of this study. The data were collected from individuals who are employees from the following institutions: local government authorities, ministry of finance (internal auditor general's office), public procurement authority (PPRA) and controller and auditor general.

The individuals who provided the information by filling the questionnaires in local government authorities are: chairperson of local government authorities, directors of local government authorities (CEOs), head of internal audit units, head of human resources, head of legal services, head of finance departments, chairpersons of tender boards, head of procurement units, head of engineering departments and head of planning in local government authorities. These persons are both customers and consumers of both internal audit and procurement management units.

Internal auditors from office of internal auditor general's office filled the questionnaires which were provided by the researcher after they were asked by the

internal auditor general who received the researcher's clearance letter provided by the University. Also, both external auditors for the CAG's office and staff from public procurement regulatory authority (PPRA) filled the questionnaires after they were requested by respective supervisors basing on the clearance letter from the University. These authorities rely on the internal auditors' reports in their decisions when they are undertaking their actions.

The likert scale questionnaires were used objectively and in a systematic manner as the data collection instruments. Before opting to the questionnaire as data collection device, there were other options such as interviews schedules and available records. Questionnaires were preferable in this study because they seemed to be more effective data collection device, which allow respondents to provide much more information of their options concerning the researched problem.

Saunders *et al.*, (2007) explain that information obtained from the questionnaires is much free from bias and researchers' impact and therefore accurate and valid data were collected. The queries addressed by the questionnaires sought factors affecting contribution of internal audit on procurement assignments in Mainland Tanzania public entities. Therefore, primary data were gathered using the likert scale questionnaires, which distributed to and collected from 300 individuals.

3.11.2 Secondary Data

The researcher collected secondary data through a review of both theoretical and empirical literature sourced from journals, reports, books and internet. The data led to the information, which enabled the writing of the literature review and helped to

establish the research gap. The keywords, which were used to search the information to articles were such as effective internal auditing, the role of internal auditing in public organization, the role of internal audit in procurement, procurement audit in public entities and so on.

Any article, which seemed to be relevant for the study was subjected to content detailed examination and the information was summarized and recorded in a tabular form. Scales (2014) states that content analysis or detailed examination demands counting and making comparison of keywords and the interpretation should be made concerning the words. It was further argued that content detailed examination facilitates the conceptual and relational analysis, which led to the establishment of the existing, and frequency of the concept most often represented by the words or phrases.

Furthermore, some secondary data were derived from local government authorities' annual procurement plans, quarterly performance reports, internal audit annual plans, internal audit reports and audit committee' reports; Controller and auditor general's audit reports, public procurement regulatory authority's reports, government reports and the like.

3.12 Unit of Analysis

One of the most important points when one is undertaking a research is the unit of analysis. Bhattacharjee (2012), states that the unit of analysis can be referred to as the individual (person), groups (collective) or objects/artifacts such as books, photos and the like which is the motive of the investigation in the study. In this study the unit of analysis was the individual toward the contribution of internal audit function in procurement assignments.

The persons who are informed on internal audit services from LGAs, Ministry of Finance, PPRA's office and CAG's office preferably the senior ones took part in filling the 5-points likert scale questionnaires. The fillers of these questionnaires were the best persons to determine the contributions of internal audit function regarding procurement assignments.

3.13 Descriptive Analysis

The descriptive Analysis is the detailed examination of the frequency, percentage and cumulative of the research questions put before the respondents. The examination in terms of descriptive analysis was only being conducted for the demographic questions such as education and experience in terms of years which normally called a nominal question. Both numerical and figural approaches are used.

3.14 Reliability Test

Reliability is defined as the extent to which results are consistent over time and have accurate representation of the total population under the study (Cohen *et al.*, 2012). Reliability means that if the respondents or independent observers repeat the research with the same methods, they will get the same results or data (Kothari, 2004). It is maintained that reliability is the degree of accuracy or precision in the measurements made by research instruments (Kumar, 2011). He insists that "The lower the degree of error the higher the reliability" (Kumar, 2011).

Bryman showed that measurement of reliability is categorized in different levels (Bryman, 2012). According to him, 0.80 and above implies an acceptable level of internal reliability, 0.70 denotes satisfactory level, and 0.60 denotes good level of

reliability. Moreover, in order to ensure reliability of the instruments, the research instruments were refined during data collection in the field as a usual practice in the quantitative researches. Again, Cronbach`s alpha that is used to measure internal consistency of set of items was applied. Here, Cronbach`s alpha using STATA was calculated and the alpha coefficient from the analyzed items shows that there is internal consistence in the data.

3.15   Tests for Validity

Validity is the ability of an instrument to measure what it is designed to measure (Bryman, 2012). Validity is defined as the degree to which researcher measures what is intended to be measured (Kumar, 2011). Therefore, effort was made to ensure that instruments are valid. For the purpose of this study three kinds of validity were considered.

3.15.1 Content Validity

This is defined as the extent to which the tested items would be fairly representative of the entire field the test intend to measure (Salkind, 2010). Essentially, dealing with content validation requires an organized investigation of the instrument to see if it covers a demonstrative sample of the characteristic to be measured (Davis *et al.,* 1997).

Content validity is constructed into a test from the outset through the choice of relevant items. Because, an exhaustive survey of literature, expert-review and piloting testing of the instrument was conducted and found the content validity of the instrument was ensured.

3.15.2 Construct Validity

Construct validity refers to whether the scores of a test or instrument measure different element (construct) they are supposed to measure (Salkind, 2010). Assuming the total score of a scale is valid, the degree to which an item measures the same thing as the total score is an indicator of the validity of that item. Furthermore, factor analysis is "a powerful and indispensable method of construct validation" (Kerlinger, 1986).

Construct validation is defined as the collection and application of validity evidence required to support the interpretation and use of test scores ad a measure of a particular construct (Salkind, 2010). The study uses eigenvalues and factor loading guide in interpretation of dimensionality of the scales. Findings revealed that all scales had high degree of unidimensional and, therefore, there is evidence of construct validity for all the scales.

3.15.3 Criterion Validity

According to Salkind (2010) criterion validity is also known as criterion-related validity, predictive validity or concurrent validity. The term is used to describe how well scores on one measure predict scores on another measure of interest (i.e. the criterion) (Salkind, 2010). Criterion-validity of the measurement was examined by estimating multiple correlation (R) was 0.897.

Thus, the independent variables had a high degree of criterion-related validity. Therefore, the results for the reliability and validity tests indicated that instrument had all the required properties.

3.16   Linking Objectives and the Questionnaire

The questionnaire was linked to the study objectives prior to starting data collection phase in order to have adequacy questionnaires that would accomplish the stated objectives. Figure 3.1 shows the linkage of the objectives to the questionnaire.

```
┌──────────┐      ┌─────────────────────────────┐      ┌──────────┐
│Objective 1│ ──▶ │ To examine competencies of  │ ──▶ │ Section 2│
└──────────┘      │ internal audit function in  │      └──────────┘
                  │ carrying out the procurement│
                  │ assignments in the mainland │
                  │ Tanzania's LGAs             │
                  └─────────────────────────────┘

┌──────────┐      ┌─────────────────────────────┐      ┌──────────┐
│Objective 2│ ──▶ │ To assess the appropriateness│ ──▶ │ Section 3│
└──────────┘      │ of internal auditing        │      └──────────┘
                  │ procedures on procurement   │
                  │ assignments in the mainland │
                  │ Tanzania's LGAs             │
                  └─────────────────────────────┘

┌──────────┐      ┌─────────────────────────────┐      ┌──────────┐
│Objective 3│ ──▶ │ To evaluate the extent of   │ ──▶ │ Section 4│
└──────────┘      │ independence of the internal│      └──────────┘
                  │ audit function for executing│
                  │ procurement assignments in  │
                  │ the mainland Tanzania's LGAs│
                  └─────────────────────────────┘
```

Figure 3.1: Linking Objectives to Questionnaire

3.17   Model Specification

The study used multiple linear regression models to analyse factors which are statistically significant in the contribution of internal audit on procurement assignments in public entities in Tanzania. Regression was used to model and predict dependent variable with one or more independent variables.

Regression model is assumed to meet the following assumptions:

3.17.1 Linearity

Linearity i.e. the relationship between dependent and independent variables results into a straight-line graph. There should be relationship between linearity outcome variable and independent variables i.e. between effective procurement assignments and internal audit competencies on procurement policies, internal audit procedures on procurement assignments and independence of internal audit.

3.17.2 Multicollinearity

The test of no multicollinearity is important in order to estimate a multiple regression model. This means the independent variables to predict dependent is not related to each other. It is assumed that in multiple linear regressions that independent variables are correlated not highly with each other. A variance inflation factor (VIF) value is used to test the assumption.

3.17.3 Homoscedasticity

The assumption is central to linear regression models. The constant variance states the situation under which the error term is the same cutting across the values of independent variables.

3.17.4 Non-zero Determinant

Variable under consideration form non-singular matrix whereby its determinant is not zero.

3.17.5 Normality

Regression assume that variables have normal distribution i.e. the residual values are normally distributed. The assumption can best be confirmed with a histogram and fitted normal curve.

These assumptions are to be met for regression to be applied. The dependent variable in this study is designed naturally to take the value 1,2,3,4 and 5. The value 1=Strong disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strong agree. Then and index that capture the effectiveness of internal audit was established based on those dependent variables.

3.18   The Regression Model

From the above explanations and equations, below is the regression model that was estimated for all the three variables of effective procurement assignments in LGAs.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ell$$

Where

Y=is the measure of effectiveness of procurement assignment in the LGAs

β_0 = constant

β_i = Coefficients of regression of the independent variables X_i (for i=1,2,3)

X_1 = Internal auditing competency on procurement policies

X_2 = Internal audit procedures on procurement assignment

X_3 =Independence of Internal audits function.

ℓ =Error term of the model

From the above equations, all the independent variables are hypothesized to positively affect procurement and therefore resulting to the effective procurement assignments in the LGAs.

3.19   Data Analysis and Interpretation

Data were collected, summarized and analyzed using STATA software version 14, and both Factor Analysis and multiple linear regression analysis were used for quantitative analyses. Factor analysis was used to examine the correlations among the variables in the data set in order to identify factors or underlying latent variables. Factor analysis works on the view that computable and evident variables could be condensed to fewer latent variables that have a common variance and were unobservable, which is known as reducing dimensionality (Bartholomew *et al.,* 2011).

These unobservable factors were not directly measured but were essentially hypothetical constructs that are used to represent variables (Cattele, 1973). Therefore, key variables that relate to the research questions were identified. The regression was used to assess factors, which affect the contribution of internal audit on procurement assignments in public entities in Tanzania.

Generally, in order to achieve objective 1, 2 and 3, the 32 factors that were considered to have influence on the effectiveness of procurement and were measured on a five-point Likert scale. The instrument was conducted to a sample of 241 staffs selected from LGAs. Exploratory Factor analysis and varimax rotation was applied in order to detect the most important factors. The number of factors to be retained was based on eigenvalue criterion and the scree plot. For the purpose of this study, factors with eigenvalue more than 1.0 were retained.

3.20   Treatment of Missing Data

In an empirical work and large data set, it is common to find incomplete information to one or more variables (Brockmeier *et al,* 2003; Kim & Curry, 1977). Presence of

missing data may be because surveys depend on respondent's behavior and attitudes (Kim and Curry, 1977). Missing data have adverse effect on the data analysis, interpretations and conclusions (Brockmeier *et al.,* 2003). For the purpose of this study, list wise deletion was used to discard all responses with one or more missing information.

3.21   Ethical Consideration

The researcher clearance letter from the OUT is a vital document to enable the researcher to undertake primary data collection from various sources for this study. Beside the clearance letter the researcher, ensured that ethical research standards are met. Bhattacherjee (2012) suggested that participatory by respondents must be voluntarily and harmless. Confidentiality issues must be observed carefully. The information of the subjects must not be disclosed to anyone, of course unless where the subjects have consented after being fully informed of the consequences if any and the use to which the information they have provided will be put to. The protection of the anonymity of the respondents is also provided. The researcher ensured that no psychological harm happened to the respondents.

Ensuring the accuracy of data when writing the research report is also important and was observed. All other ethical issues including being neutral, avoiding plagiarism have been maintained and taken care in the study.

3.22   Summary of the Chapter

The chapter consists of research detailed i.e. research methodology process consisting all steps, from the first stage to the last stage of the undertaken study. It consists of the

area of study, research philosophy, research design, sampling, variable measurement, data collection and instruments, data analysis, data processing and analysis procedures and issue of ethical consideration. All these tests and analysis mentioned will be done using statistical software, STATA v.14 of which the data will be forecasted in the coming chapter.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1   Overview

The purpose of this chapter is to present the results of factor analysis and the regression analysis to test the study research hypothesis. The chapter explains the summary of findings from pilot study, then basic characteristics of respondents from which data were collected. Further, it describes factors for the effectiveness procurement assignments. Then, several tests for the linear model and then factor analysis and finally empirically estimated factors that affects the effectiveness of procurement assignment using multiple linear regression model.

4.2   Results from the Pilot Study

A pilot study comprising of 21 respondents from Musoma, Rorya and Serengeti LGAs was conducted from April to May 2019 (i.e. 7 respondents from each LGAs). Preliminary results from the pilot study were used to make modification of the instrument by eliminating errors and ambiguous statement and improving clarity to the questions. During the pilot study, it was noticed however that, questions that were categorical in nature comprising of "Yes" and "No" responses could result into missing of important information from respondents, which could result into biased results. To get rid of that problem, the final questionnaires used in this study were modified and response choice were coded in likert scale (1=strongly disagree to 5=strongly agree) to allow the respondents to have a wide range of choice from each question.

4.3   Basic Profile of the Respondents

In this study, 300 questionnaires were administered to respondents and the response rate was high where 241 questionnaires had all necessary information for analysis filled in (i.e. an 80% response rate) and only 20% of the questionnaires had missing values, which we dropped in the analysis. Figure 4.1 shows the respondents and non-respondent rates.
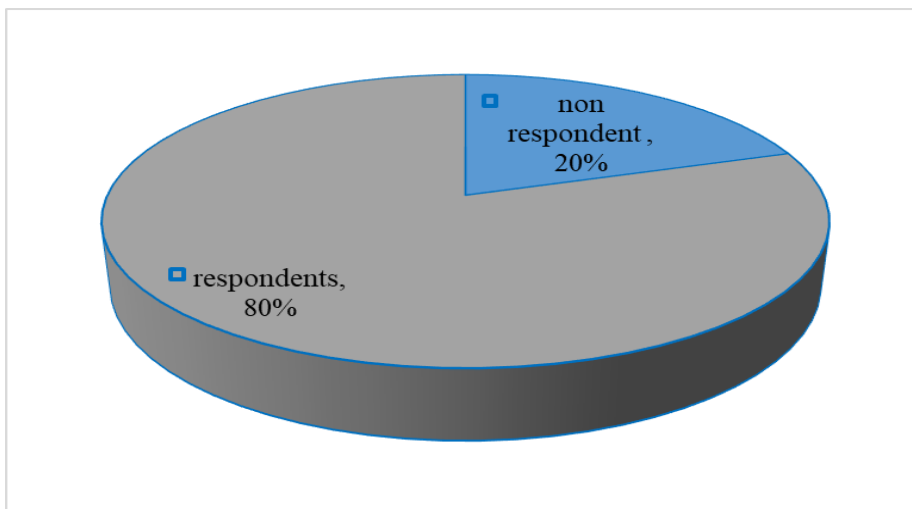
Figure 4.1: Respondents and Non-Respondent Rates

The questionnaire used was divided into five sections where section one was on general information of the respondent, section two on internal audit competencies on procurement policies, section three on internal audit procedures on procurement assignments, section four on independence of internal audit and section five on effective procurement assignments. Therefore, the analysis for this study on the basic profile of the respondent uses 241 respondents who completed the questionnaire. The respondents profile gives an insight into the nature and characteristics of the respondents of the study. The analysis will focus on professionalism level, years of experience, number of staff in internal audit unit and highest level of education of the respondents in the LGAs.

4.3.1 Level of Education of the Respondents

Level of education was sought to be important to know as it is important for general understanding of the procurement process in the LGAs. Table 4.1 indicates that most of the LGAs comprises of staffs with advanced diploma/first degree (52%) and 43% with master's degree. This could be an indicator that LGAs nowadays comprises of educated people who could understand well the operation of their entities.

Table 4.1: Level of Education of the Respondents

Highest level of education	Freq.	Percent	Cum.
Diploma	11	4.56	4.56
Advanced Diploma/First Degree	126	52.28	56.85
Master's degree	104	43.15	100.00
Total	**241**	**100.00**	

Source: Research Data, 2019

4.3.2 Level of Professionalism of the Respondents

The level of professionalism is also important and has influence on the performance of LGAs and their procurement process. Results in Table 4.2 indicate that most of the respondents had advanced diploma/first degree in procurement/accountancy (63%). Further, 18% had CPA and other professionalism comprised of less than 10% (i.e. diploma in accountancy (2%), professional CPSP (9%) and degree in law (8%))

Table 4.2: Level of Professionalism of Respondents

Level of professionalism	Freq.	Percent	Cum.
Diploma in Accountancy	5	2.07	2.07
Advanced Diploma/First Degree in Procurement/Accountancy	152	63.07	65.15
Professional CPA	44	18.26	83.40
Professional CPSP	21	8.71	92.12
Degree in law	19	7.88	100.00
Total	241	100.00	

Source: Research Data, 2019

4.3.3 Experience in Management of the Respondents

Experience of the respondent could make them work more productive in their area they work. Table 4.3 shows that most of the respondents had experience less than or equal to 20 years. The years of experiences are as shown on Table 4.3 that 0-3 years (17%), 4-6 years (28%), 7-10 years (21%) and 11-20 years (26%). According to Tubbs (1992) experience in auditor as it enable one to perform procurement audit to validate compliance with various legislations as provided by regulatory authorities. Further, it was pointed out that auditors who are experienced on procurement will ensure that all procurement audits are conducted in a manner which enables the auditor to contribute to the entity so that there is value for money for acquired items (Tubbs, 1992).

Table 4.3: Experience in Management of the Respondents

Years of experience in management	Freq.	Percent	Cum.
0-3 years	42	17.43	17.43
4-6 years	67	27.80	45.23
7-10 years	51	21.16	66.39
11-20 years	63	26.14	92.53
21-30 years	11	4.56	97.10
Above 30 years	7	2.90	100.00
Total	**241**	**100.00**	

Source: Research Data, 2019

4.3.4 Number of Internal Audit Staff by Entity

Summary of the number of internal audit staff available according to the LGAs in Table 4.4 shows that most LGAs comprised of 3 staffs in internal audit office, the number which is low according to LGAs requirement of 7 to 8 staffs per LGA. Results

further shows that out of 30 entities surveyed only Kinondoni MC, Kigamboni MC, Temeke MC, Ubungo MC and Dodoma CC has the number greater than 3. This information indicates the need to consider employment of more staffs in internal audit office to meet requirement of the LGA and improve their effectiveness in the procurement assignment.

Table 4.4: Number of Internal Audit Staff by Entity

Entity	Number IA of staff
Singida DC	2
Songwe DC	3
Nzega DC	2
Njombe TC	2
Njombe DC	2
National Audit Office	5
Musoma DC	2
Mpwapwa DC	3
Kongwa DC	3
Kisarawe DC	4
Kinondoni MC	7
Kigamboni MC	5
Kibaha DC	3
Internal Audit General	3
Dodoma CC	4
Chemba DC	2
Bunda TC	1
Bahi DC	2
Bagamoyo DC	3
PPRA	3
Tarime TC	2
Tarime DC	2
Temeke MC	6
Ubungo MC	6
Wanging'ombe DC	2
Babati DC	2
Babati TC	2
Bunda DC	2
Chamwino DC	3
Manyoni MC	2
	2
Kondoa DC	

Source: Research Data, 2019

According to (Belay, 2017) when there is a shortage of staff the responsibilities and workloads of existing staff members increase which may leads to mistakes and other inefficiencies and negatively affect individual performance, client care, and ultimately organizational performance.

4.4   Effective Procurement Assignments Factors

Questions regarding effective procurement assignments with reference to PPRA performance and score sheet, IIA operation manual and INTOSAI form were asked to 241 respondents. The respondents were expected to indicate how effective internal audit were in procurement. A five-point likert scale ranked from strongly disagree =1 to strongly agree =5 were used to rank respondents' responses as presented on Table 4.5.

Table 4.5: LGA Effectiveness on Procurement Assignments

	SD	D	N	A	SA
Comply with procurement legislations	10.79	27.8	26.97	25.31	9.13
Minimize procurement costs	5.81	43.57	25.31	17.84	7.47
Procure the required goods, works and services	3.73	29.88	24.07	29.88	12.45
Timely acquire goods, work and services	11.62	34.02	29.05	21.58	3.73

Source: Research data, (2019)

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

Results on Table 4.5 show that, LGAs are not effective in procurement. This is shown with the higher number of respondents who perceive that it was not effective across the four factors that we used to measure the effectiveness of procurement assignment as most of the responses were on disagree and neutral. These results on perception are

consistent with controller and auditor general report which cites most of LGAs to be ineffective in procurement[2].

4.5 Testing Assumptions of Multiple Linear Regression Model

For the multiple linear models to be estimated with confidence, several tests must be conducted to ensure that estimated model includes the required variables and results could be used for statistical inferences. These tests enable us to avoid unreliable estimates, which cannot be used for statistical inferences. These tests include; normality test, heteroskedasticity test, omitted variable test, model specification error test, and multicollinearity test and checking for outlier.

4.5.1 Normality Test

Estimation of the multiple regression models requires the variable to meet the normality test. By using Kurtosis and Skewness we indicate the extent to which non-normality would affect the usual inferences in the analysis of variance. In the current study, the responses ranging from 1 to 5 were tested if they meet the assumption of normality of the collected data. Won *et al.,* (2017) suggested that the range for both Kurtosis and Skewness is acceptable if it is in the range of ±2. In this study value of both Kurtosis and Skewness fall within the recommended range of ±2 (See Table 4.6). Therefore, with these values the assumption of normality is not violated in this study.

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[2] see CAG reports here http://www.nao.go.tz/category/cag-reports/

Table 4.6: Normality Test

| Variable | Pr (Skewness) | Pr (Kurtosis) | ------joint------ | |
			adj chi2(2)	Prob>chi2
Competencies	0.1935	0.3392	1.27	0.5195
Procedures	0.7523	0.6341	2.71	0.3047
Independence	0.9126	0.2387	1.41	0.4934

Source: Research data, (2019)

4.5.2 Heteroskedasticity Test

Heteroskedasticity occurs when the variance of the error terms differs across observations. If the error terms do not have constant variance, they are said to be heteroskedastic. When the variance of the error term is constant it termed as homoscedastic (Zaman, 2000). The assumption of homoscedasticity of error term is important to be tested. Breusch-Pagan test, which is the test for heteroskedasticity, was used to test if there was heteroskedasticity in our data. Results on Table 4.7 show that we failed to reject the assumption of homoscedasticity of residuals. Therefore, we conclude that there was no heteroskedasticity in the data.

Table 4.7: Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity

Ho: Constant variance
Variables: fitted values of effectiveness
chi2(1)   =   2.03
Prob > chi2 =   0.1538

Source: Research Data, (2019)

4.5.3 Omitted Variable Test

If the model omits important variables it would yield inconsistent coefficients. According to Stock and Watson (2003) if the model has omitted variable it means that omitted variable is the determinant of dependent variable. Therefore, the study tested

the presence of omitted variable in our model. Using Ramsey RESET test, results however shows that; we do not reject a null hypothesis that model has no omitted variables (see Table 4.8). Therefore, we don't need to include more variables for analysis of our model.

Table 4.8: Ramsey RESET Test using Powers of the Fitted Values 0f Effectiveness

Ho: model has no omitted variables
$F(3, 234) = \quad 1.50$
$\text{Prob} > F = \quad 0.2147$

Source: Research data, (2019)

4.5.4   Model Specification Test

In order to estimate model, diagnostic tests were performed to see if relevant variables were included in the model. The test was performed in order to avoid a problem of biased coefficient estimates and very large standard error to avoid invalid statistical inferences. Therefore, model fitness test was conducted before using model for statistical inferences.

This was performed to see if relevant model specification is used in regression. The linear model is assumed to be the results of the linear combination of the predictors. The two sides of the model were considered where first we considered the link function of the outcome variables on the left-hand side of the equation. Also, the function is assumed to be the correct function to use. Further, the right-hand side of the equation assumes that all relevant variables are included in the model and both models are the linear combination of the predictors.

Result from Table 4.9 indicates that, all the models are correctly specified since _hat is statistically significant at 1 percent. On the other hand, _hatsq was statistically insignificant[3]. Therefore, it is with results we say the model is correctly specified and can be estimated and can be used for statistical inferences.

Table 4.9: Model Specification Test

Competencies Factor

Effectiveness	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
_hat	0.9983	0.1191	8.38	0.000	0.764	1.233
_hatsq	0.0545	0.1805	0.30	0.763	-0.301	0.410
_cons	-0.0320	0.1399	-0.23	0.819	-0.308	0.244

Procedures Factor

Effectiveness	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
_hat	0.8864	0.0872	10.17	0.000	0.715	1.058
_hatsq	0.1292	0.0683	1.89	0.060	-0.005	0.264
_cons	-0.1690	0.1149	-1.47	0.143	-0.395	0.057

Independence Factors

Effectiveness	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
_hat	0.9275	0.0910	10.19	0.000	0.748	1.107
_hatsq	0.1045	0.0750	1.39	0.165	-0.043	0.252
_cons	-0.1149	0.1137	-1.01	0.313	-0.339	0.109

Source: Research data, (2019)

4.5.5 Results for Multicollinearity Test

The existence of a perfect or exact linear relationship among some or all explanatory variables of a regression model (Multicollinearity) must be tested in research. Multicollinearity phenomenon is happens when there is high correlation in two explanatory variables in linear regression, which is something undesirable (Daoud, 2017; Hair *et al,* 2014). Presence of multicollinearity would require only one of the variables that are correlated to be used in the analysis (Shayo, 2018).

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[3] See https://stats.idre.ucla.edu/stata/webbooks/reg/chapter2/stata-webbooksregressionwith-statachapter-2-regression-diagnostics/

Testing if independent variables are not perfectly correlated is one of the important assumptions to be conducted in this study. This is because presence of multicollinearity inflates standard error which decreases reliability and often results can be confusing and misleading (Field, 2009). Field (2009), argues that as multicollinearity change into higher positive also the standard errors change the same way. Multicollinearity also limits the size of the regression coefficients and obscures the significance of individual predictor variable.

Multicollinearity for this study was detected by using variance inflation factors (VIF) for each independent variable. In this case multicollinearity exists if VIF is greater than 10 or if 1/VIF is less than 0.10. To ensure that multicollinearity was not a problem to our analysis, the VIF of our independent variable was performed. Results from Table 4.10a-4.10c VIF were below 10 and 1/VIF was greater than 0.10 which indicate there was no severe multicollinearity among explanatory variables used[4] .

Table 4.10(a): Multicollinearity of Internal Audit Competencies in Procurement Assignment

Variable	VIF	1/VIF
CF_1	2.49	0.401
CF_3	2.04	0.491
CF_2	1.76	0.568
CF_5	1.44	0.693
CF_4	1.32	0.758
CF_9	1.29	0.778
CF_8	1.26	0.791
CF_6	1.17	0.854
CF_10	1.13	0.883
CF_7	1.11	0.897
Mean VIF	**1.5**	

Source: Research data, (2019)

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[4] See https://stats.idre.ucla.edu/stata/webbooks/reg/chapter2/stata-webbooksregressionwith-statachapter-2-regression-diagnostics/

Table 4.10b: Multicollinearity of Internal Audit Independence in Procurement Assignment

Variable	VIF	1/VIF
IF_8	3.53	0.284
IF_9	3.28	0.305
IF_7	1.95	0.514
IF_2	1.70	0.588
IF_1	1.63	0.615
IF_6	1.4	0.712
IF_11	1.38	0.723
IF_4	1.28	0.783
IF_5	1.25	0.798
IF_3	1.13	0.884
IF_10	1.12	0.889
Mean VIF	1.79	

Source: Research data, (2019)

Table 4.10c: Multicollinearity of Internal Audit Procedures in Procurement Assignment

Variable	VIF	1/VIF
PF_6	2.64	0.379
PF_7	2.55	0.392
PF_4	2.47	0.405
PF_8	2.43	0.411
PF_3	2.39	0.418
PF_10	2.26	0.442
PF_5	2.08	0.482
PF_9	2.04	0.491
PF_11	1.73	0.578
PF_1	1.39	0.721
PF_2	1.25	0.801
Mean VIF	2.11	

Source: Research Data, (2019)

4.5.6   Checking for Outliers and Missing Data

4.5.6.1 Checking for Outliers

Outliers are data points with extreme values on variable(s) that distort statistics (Torres-Reyna, 2007). Presence of outlier could result into a loss of precision and

biased results. On the other hand, outlier could lead to both type I and type II errors which could result from incorrect data entry, failure to specify missing values codes in computer syntax, sampling error and distribution for variable in the population has extreme outlier (Tabachnick and Fidell, 2007). Therefore, if outliers are found in the data are to be removed, rescored or transformed (Tabachnick and Fidell, 2007). The Av Plots was used to detect outlier in the dataset (Figure 4.2). All data points seem to be in range, no outliers observed could result into challenges in our estimation.
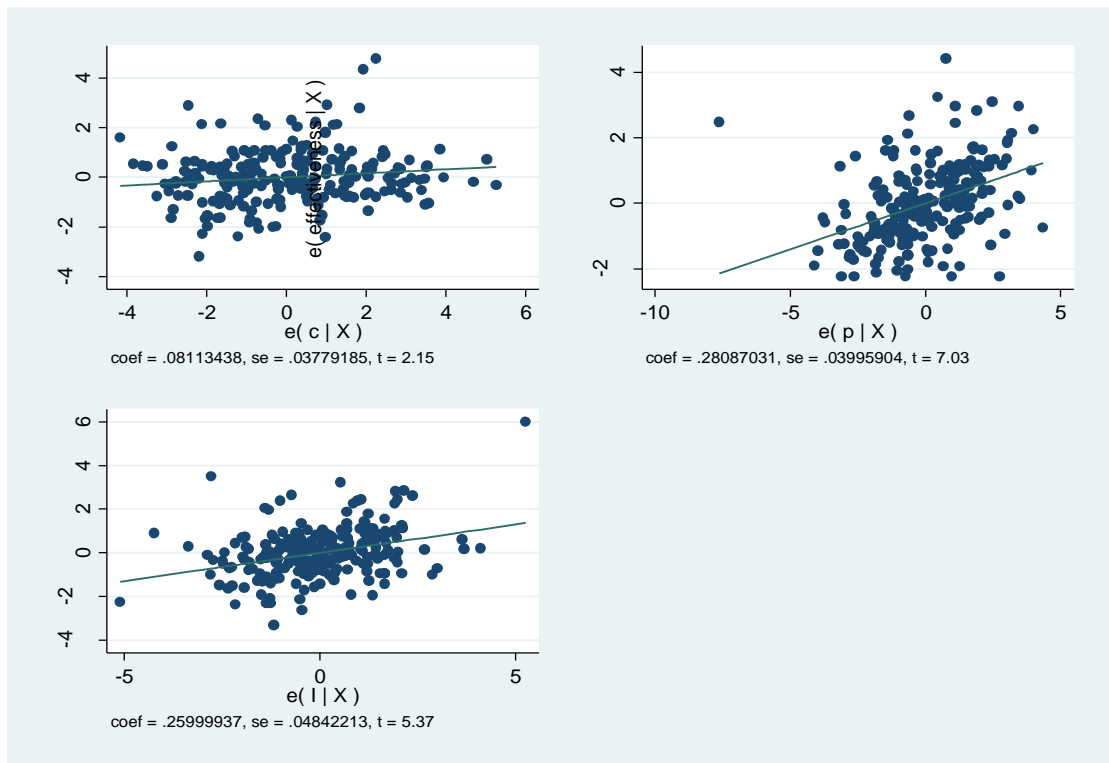
Figure 4.2: Av Plots for Checking Outlier

4.5.6.2 Treatment of Missing Data

After estimation of summary statistics using Stata, 4 questionnaires (1.6% of the sample) were found to have missing values in some of the responses. However, missing values had no consistent or systematic pattern which implies that values were

missing completely at random (MCAR). According to Rubin (1987), values are missing completely at random if the probability of a missing response is completely independent of all other measured or unmeasured characteristics under examination. According to Cheema (2014) data missing completely at random is safe to be removed from the dataset. Therefore, a list wise deletion method was used to remove cases with missing data. For instance, in these 4 questionnaires, were dropped form data sets hence remaining with 241 questionnaires which is used throughout the analysis of this study.

4.6 Factor Analysis of the Effective Procurement Assignments

4.6.1 Exploratory Factor Analysis

The objective of the study was to analyze and identify factors that influence effectiveness of LGAs in procurement assignment. A set of 36 factors was identified that can influence effectiveness of the procurement of LGAs. Table 4.11 lists all the identified factors that are perceived to influence effectiveness of procurement assignment. For empirical estimation of factors that are perceived to influences effectiveness of procurement, the questionnaire formulated were measured on a five-point Likert scale.

As the objective of the study was to identify and analyses factors that influences effectiveness of procurement in LGAs, Exploratory factor analysis using iterated principal factor and varimax rotation was used to extract the most important factors. Exploratory factor analysis is a method of examining data sets for purposes of identifying latent variables, examining which variables contribute most information (Elliot and Woodward, 2016).

Table 4.11: List of Factors that Influences Effectiveness of LGAs in Procurement

CF	Internal Audit Competencies on Procurement Policies (law)
CF_1	Internal Auditors possess qualifications necessary to carry out procurement audit.
CF_2	Internal Auditors have necessary experience to audit procurement assignments.
CF_3	Internal Auditors have training on procurement Act
CF_4	The number of Internal Audit Staff in the organization is adequate.
CF_5	At least every year Internal Auditors attend training on procurement Audit.
CF_6	Internal Audit Unit issue audit findings to management at least once in three months.
CF_7	The management responds positively to Internal Auditors' recommendations.
CF_8	Staff attend on the job training at least twice a year
CF_9	Internal Auditors trained on information technology
CF_10	At least one Internal Auditor is a law graduate
PF	**Internal Audit procedures on procurement assignments**
PF_1	Internal Auditors are knowledgeable on Procurement cycle
PF_2	Internal Audit Unit reviews the procurement plan as required by professional body and PPRA.
PF_3	Internal Audit Unit reviews user department initiation of the procurement requirements.
PF_4	Internal Audit Unit reviews composition of Tender Board in the organization.
PF_5	Internal Audit reviews the involvement of the Tender Board on the contracts awarded.
PF_6	Internal Audit Unit evaluates decisions for the procurement method applied in the acquisition of the specific tender.
PF_7	Internal Audit evaluates the work of the evaluation committee for submitted tenders.
PF_8	Internal Audit Unit reviews how the Evaluation criteria for submitted tenders were developed.
PF_9	Internal Audit Unit reviews communication of tender awards to suppliers/services providers who are about to win the said tenders.
PF_10	Internal Audit Unit reviews the conduct of negotiations with bidders before awarding the tender.
PF_11	Internal Audit Unit reviews the formation of contract management team.
IF	**Independence of Internal Audit**
IF_1	Internal Audit Unit is accountable to Chief Executive Officer Director.
IF_2	Internal Audit Unit report the audit results to Director
IF_3	Internal Audit Unit report audit results to council
IF_4	Internal Auditors is sufficiently removed from political pressure in carrying on audit assignment
IF_5	Internal Audit Unit has free access to documents
IF_6	Internal Audit Unit has free access to those charged with Governance.
IF_7	The council has Internal Audit Charter
IF_8	The Internal Audit charter has clearly defined responsibilities of internal audit.
IF_9	The Internal Audit Charter has clearly defined authorities of Internal Audit Unit
IF_10	The Internal Audit unit has its own sub-vote
IF_11	The Internal Audit unit sub-vote is sufficiently funded
EM	**Effective Procurement Assignments**
EP_1	LGA comply with procurement legislations
EP_2	LGA minimize procurement costs
EP_3	LGA procure the required goods, works and services
EP_4	LGA timely acquire goods, work and services

4.6.2   Factorability of the Variables

Prior to conducting exploratory factor analysis, the adequacy of the data was examined using various criteria as follow:

4.6.2.1 Correlation and Anti-Image Correlations among Explanatory Variables

According to Malhotra and Dash (2009) for factor analysis to be appropriate variables must be correlated. For this purpose, correlations among explanatory variables were computed (see Table 4.12a-4.12c). The correlation matrix of factor was examined in order to understand the inter-correlation between factors. Results show that there was a moderate inter-correlation among variables which suggest the appropriateness of conducting factor analysis among variables.

Table 4.12(a): Correlations Results among Competencies of Internal Audit

	CF_1	CF_2`	CF_3	CF_4	CF_5	CF_6	CF_7	CF_8	CF_9	CF_10
CF_1	1.0000									
CF_2`	0.7011	1.0000								
CF_3	0.7400	0.6673	1.0000							
CF_4	0.3593	0.4277	0.3646	1.0000						
CF_5	0.5330	0.5083	0.4544	0.5323	1.0000					
CF_6	0.5354	0.4448	0.4753	0.2187	0.3871	1.0000				
CF_7	0.2818	0.2816	0.3318	0.2585	0.2182	0.3872	1.0000			
CF_8	0.4060	0.4470	0.4465	0.4273	0.4029	0.1995	0.2055	1.0000		
CF_9	0.4728	0.4230	0.5006	0.2979	0.3452	0.2140	0.1819	0.5532	1.0000	
CF_10	0.1983	0.2131	0.2225	0.1853	0.2788	-0.0080	-0.0179	0.2643	0.1370	1.0000

Source: Research data, (2019)

Table 4.12(b): Correlations Results among Procedures of Internal Audit

Variable	PF_1	PF_2	PF_3	PF_4	PF_5	PF_6	PF_7	PF_8	PF_9	PF_10	PF_11
PF_1	1.0000										
PF_2	0.3772	1.0000									
PF_3	0.4642	0.4094	1.0000								
PF_4	0.4496	0.4515	0.6270	1.0000							
PF_5	0.4593	0.4459	0.5560	0.6904	1.0000						
PF_6	0.4173	0.3903	0.5854	0.6291	0.6261	1.0000					
PF_7	0.4367	0.3627	0.6287	0.5437	0.5528	0.6504	1.0000				
PF_8	0.3425	0.3711	0.5707	0.6054	0.5090	0.7276	0.6643	1.0000			
PF_9	0.3429	0.2672	0.5097	0.5217	0.4856	0.6057	0.5886	0.6204	1.0000		
PF_10	0.3505	0.3298	0.5164	0.5336	0.5414	0.5880	0.5616	0.5477	0.6443	1.0000	
PF_11	0.2616	0.3332	0.5120	0.4532	0.4199	0.4824	0.5508	0.5129	0.5858	0.5179	1.0000

Source: Research data, (2019)

Table 4.12(c): Correlations results among Independence of Internal Audit

Variable	IF_1	IF_2	IF_3	IF_4	IF_5	IF_6	IF_7	IF_8	IF_9	IF_10	IF_11
IF_1	1.0000										
IF_2	0.6571	1.0000									
IF_3	0.3409	0.4235	1.0000								
IF_4	0.1253	0.1718	0.2482	1.0000							
IF_5	0.1080	0.2080	0.2048	0.3165	1.0000						
IF_6	0.1571	0.1654	0.1542	0.3144	0.4625	1.0000					
IF_7	0.2265	0.1964	0.1394	0.3660	0.2779	0.3155	1.0000				
IF_8	0.1551	0.1396	0.0951	0.3570	0.3094	0.3923	0.6929	1.0000			
IF_9	0.1700	0.1160	0.0951	0.3488	0.3456	0.3818	0.6855	0.7763	1.0000		
IF_10	0.1626	0.1439	0.0655	0.3090	0.1354	0.2371	0.2523	0.1553	0.1854	1.0000	
IF_11	0.0072	0.0125	0.1930	0.4078	0.2824	0.3114	0.2285	0.4122	0.3913	0.2729	1.0000

Source: Research data, (2019

Anti-image correlation matrix was computed. The presence of small partial correlations among the variables points to the existence of true factors (i.e partial correlation) (Hair *et al.,* 2014). The anti-image correlation matrix calculated for the data establish that the partial correlation matrix among variables was very low and also the diagonals of anti-image correlation (i.e. sampling adequacy) were more than 0.5 (see Table 4.13a-4.13c), which support the inclusion of each item in the factor analysis (Hair *et al.,* 2014; Malhotra and Dash, 2009).

Table 4.13(a): Anti-Image Matrices for Competencies Factors

	Variable	CF_1	CF_2	CF_3	CF_4	CF_5	CF_6	CF_7	CF_8	CF_9	CF_10
	CF_1	0.590									
	CF_2	-0.092	0.665								
	CF_3	-0.122	-0.065	0.737							
	CF_4	0.032	-0.076	-0.020	0.556						
	CF_5	-0.075	-0.033	0.023	-0.182	0.571					
	CF_6	-0.077	-0.050	-0.049	0.057	-0.081	0.527				
	CF_7	0.020	-0.003	-0.054	-0.099	0.010	-0.135	0.653			
	CF_8	0.009	-0.067	-0.019	-0.072	-0.032	0.016	-0.022	0.511		
	CF_9	-0.048	0.004	-0.075	0.004	-0.023	0.049	-0.026	-0.212	0.545	
Anti-image Covariance	CF_10	0.005	-0.002	-0.048	0.000	-0.119	0.054	0.034	-0.082	0.055	0.733

Table 4.13(b): Anti-Image Matrices for Procedures Factors

	Variable	PF_1	PF_2	PF_3	PF_4	PF_5	PF_6	PF_7	PF_8	PF_9	PF_10	PF_11
	PF_1	0.544										
	PF_2	-0.085	0.618									
	PF_3	-0.051	-0.043	0.584								
	PF_4	0.005	-0.041	-0.086	0.625							
	PF_5	-0.037	-0.060	-0.005	-0.108	0.854						
	PF_6	-0.014	-0.001	-0.037	-0.016	-0.067	0.505					
	PF_7	-0.031	0.011	-0.081	0.037	-0.050	-0.023	0.639				
	PF_8	0.020	-0.023	-0.013	-0.049	0.029	-0.110	-0.088	0.615			
	PF_9	0.019	0.027	-0.021	-0.004	-0.002	-0.025	-0.014	-0.063	0.746		
	PF_10	-0.026	-0.010	-0.008	-0.011	-0.047	-0.026	-0.023	-0.006	-0.129	0.524	
Anti-image Covariance	PF_11	0.055	-0.057	-0.038	-0.004	-0.004	0.004	-0.062	-0.022	-0.095	-0.038	0.793

Table 4.13(c): Anti-Image Matrices for Independence Factors

	Variable	IF_1	IF_2	IF_3	IF_4	IF_5	IF_6	IF_7	IF_8	IF_9	IF_10	IF_11
	IF_1	0.582										
	IF_2	-0.257	0.708									
	IF_3	-0.049	-0.151	0.658								
	IF_4	0.036	-0.055	-0.045	0.592							
	IF_5	0.062	-0.086	-0.031	-0.012	0.587						
	IF_6	-0.030	-0.001	-0.007	-0.029	-0.180	0.600					
	IF_7	-0.014	0.008	-0.031	-0.045	-0.014	0.013	0.668				
	IF_8	0.001	-0.026	0.039	0.010	0.007	-0.038	-0.117	0.574			
	IF_9	-0.029	0.016	0.025	0.008	-0.018	-0.016	-0.101	-0.130	0.503		
	IF_10	-0.041	-0.042	0.081	-0.072	0.045	-0.047	-0.089	0.049	0.015	0.712	
Anti-image Covariance	IF_11	0.011	0.049	-0.098	-0.102	-0.030	-0.039	0.095	-0.067	-0.052	-0.133	0.554

4.6.2.2 Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy

KMO measure of sampling adequacy refers to an index used to determine the relevance of conducting factor analysis. KMO is the measure of the extent to which correlation between pairs of variables can be explained by another variable. The rule of thumb is that factor analysis cannot be done if the KMO is less than 0.5 (Elliot and Woodward, 2016; Malhotra and Dash, 2009). In this study the computed value of KMO statistic is 0.897, which is meritorious according to Kaiser (1974) (see Table 4.14).

4.6.2.3 Bartlett's Test of Sphericity

According to Sharma (2012) Bartlett's is a test of the null hypothesis that all true correlation between variables in the data set are zero (i.e. there is no actual correlation structure at all). Here, the approximate chi-square statistic is 3967 with 496 degrees of freedom, which is significant at the 0.01 level (see Table 4.14). This significant value rejects the null hypothesis that the correlation coefficient matrix is an identity matrix. Therefore, with the results it is shown that factor analysis is appropriate to be done as there are sufficient items and are there is correlation for each factor.

Further, the uniqueness which gives the proportion of the common variance of the variable not associated with the factors were moderate which indicates the values of communalities were significantly higher (i.e. uniqueness is equal to 1– communality) (see Table 4.14) and this justify the use of the variable in the model.

Table 4.14: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.897
Bartlett's Test of Sphericity	Approx. Chi-Square	3966.638
	Df	496
	Sig.	0.000

Source: Research data, (2019)

4.7   Factor Analysis Results

Upon completion of the requirement of the factor analysis, the set of 36 variables explaining effectiveness of procurement in the LGAs were subjected to analysis. Explanatory factors analysis using iterated principal factor was used for extraction of factors and number of factors to be retained was guided by the requirement that factors with eigenvalues greater than 1.0 and the scree plot. Factors with eigenvalues more than 1.0 were retained. Table 4.15 shows factors with eigenvalues greater 1.0. Then, using the oblique rotation that allow factors that correlate compared to orthogonal rotation method that fit more for factors that are uncorrelated (Costello and Osborne, 2005). The rotated exploratory factor analysis was done and four (4) factors were extracted successfully following the criterion. The first factor explained 56% of the variance, the second factor 45% of the variance, the third factor 37% and the fourth factor 15%.

Table 4.15: Total Variance Explained

Factor	Eigen Value	Proportion
1	9.313	0.560
2	7.437	0.447
3	6.224	0.374
4	2.464	0.148

Source: Research data, (2019)

In addition to retaining factors using eigenvalue criterion, Costello and Osborne (2005), as first proposed by Cattel in 1966 suggested that Scree test can be used to assess the number of factors to be retained in addition to the Kaiser criterion. Similar to the Kaiser criterion, Scree plot yielded similar results of four (4) factors above the point of inflection. Four (4) factors were retained as it is shown on the Figure 4.3. Further, it could be taken that the proportion of variance explained by these four factors accounted for more than 90% and therefore the contribution of other factors is minimal.
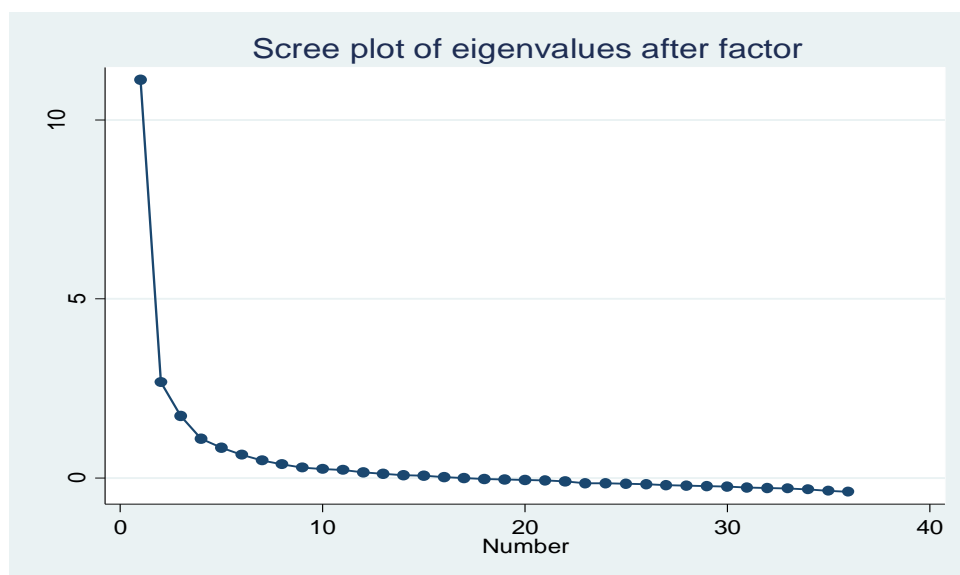
Figure 4.3: Scree Plot of Eigenvalues

All the four factors retained met the requirement that a factor should have at least three items loading onto each of them. According to Costello and Osborne (2005) factor with less than three items loading is generally weak and unstable. Hair *et al*., 2014 further suggested that factor with 5 or more strongly loading items are desirable and it is an indicator of a solid factor. Factor extraction by iterated principal factor, the rotated pattern matrix was constructed with all factor loading more than 0.45 which is the minimum requirement according to (Hair *et al.*, 2014).

Table 4.16: Exploratory Factor Analysis –Pattern Matrix

	Factor				
Variable	**1**	**2**	**3**	**4**	**Uniqueness**
CF_1			0.736		0.2713
CF_2			0.701		0.3495
CF_3			0.730		0.3480
CF_4			0.577		0.6429
CF_5			0.662		0.5372
CF_6					0.6282
CF_7					0.7309
CF_8			0.697		0.5368
CF_9			0.615		0.6472
CF_10					0.8400
PF_1					0.6252
PF_2					0.6858
PF_3	0.567				0.4417
PF_4	0.559				0.3764
PF_5	0.637				0.4414
PF_6	0.804				0.32
PF_7	0.715				0.3913
PF_8	0.790				0.3567
PF_9	0.760				0.4116
PF_10	0.698				0.4686
PF_11	0.623				0.5555
IF_1				0.697	0.5171
IF_2				0.784	0.3871
IF_3					0.8307
IF_4				0.453	0.6313
IF_5					0.7223
IF_6					0.7055
IF_7				0.545	0.5363
IF_8				0.589	0.45
IF_9				0.611	0.4497
IF_10					0.8398
IF_11				0.582	0.5653
EP_1		0.529			0.458
EP_2		0.551			0.4559
EP_3					0.5963
EP_4		0.462			0.6192

Note: Factor with loadings<0.45 are suppressed

Source: Research data, (2019)

Therefore, the EFA of the 36 items, using iterated principal factors explains more than 90% of the variance (Table 4.16).

4.8   Interpretation of Factors

Upon completion of the various recommended approach highlighted above in deciding the number of factors, it was concluded that 4 factors were retained.

Table 4.17: Critical Retained Factors for Effective Procurement

SN	Factor	Items in Factors
1	Internal Audit Competencies on Procurement Policies (law)	o Internal Auditors possess qualifications necessary to carry out procurement audit o Internal Auditors have necessary experience to audit procurement assignments o Internal Auditors have training on Procurement Act o The number of Internal Audit Staff in the organization is adequate o At least every year internal Auditors attend training on procurement Audit o Staff attend on the job training at least twice a year o Internal Auditors trained on Information technology
2	Internal Audit Procedures on procurement assignments	o Internal Audit Unit Reviews user department initiation of the procurement requirement o Internal Audit Unit Reviews composition of Tender Board in the Organization o Internal Audit reviews the involvement of the Tender Board on the contracts awarded. o Internal Audit Unit evaluates decisions for the procurement method applied in the acquisition of the specific tender. o Internal Audit evaluates the work of the evaluation committee for submitted tenders. o Internal Audit Unit reviews how the Evaluation criteria for submitted tenders were developed. o Internal Audit Unit reviews communication of tender awards to suppliers/services providers who are about to win the said tenders. o Internal Audit Unit reviews the conduct of negotiations with bidders before awarding the tender. o Internal Audit Unit reviews the formation of contract management team.
3	Independence of Internal Audit	o Internal Audit Unit is accountable to Chief Executive Officer Director. o Internal Audit Unit report the audit results to Director o Internal Auditor is sufficiently removed from political pressure in carrying on audit assignment o The council has Internal Audit Charter o The Internal Audit charter has clearly defined responsibilities of internal audit. o The Internal Audit Charter has dearly defined authorities of Internal Audit Unit o The Internal Audit unit sub-vote is sufficiently funded
4	Effective procurement assignment	o LGA comply with procurement legislations o LGA minimize procurement costs o LGA timely acquire goods, work and services

These factors are regarded as determinants of effective procurement in LGAs in mainland Tanzania. The factors originated from consolidation of 36 items that aimed at determining effective procurement and they were based on 5-point Likert scale. Table 4.17 list all items that makes the factors. Four factors were selected with factors loading greater than 0.45. These four factors explained more than 90% of the cumulative variance. The factors are labeled as Factor 1 to Factor 4 for interpretation (see Table 4.17).

4.9   Reliability Analyses

Cronbach's alpha was used to examine the internal consistency for each of the scale. The alphas were moderate, ranging from 0.651 to 0.748. Composite scores were created for three factors, based on the mean of items, which had their primary loading on each factor. Descriptive statistics are presented on Table 4.18.   The skewness and kurtosis were within a tolerable range (i.e. range between -2 and +2) for assuming normal distribution, which suggested that the distributions looked approximately normal (George & Mallery, 2010).

Table 4.18: Descriptive statistics of the Reliability Test

Factor	No. Items	Mean	S.D	Skewness	Kurtosis	Cronbach Alpha
CF: Competencies Factors	7	3.143	0.819	-0.176	0.329	0.748
PF: Procedures Factors	9	2.867	0.827	0.588	0.926	0.703
IF: Independence Factors	7	3.475	0.638	-0.193	0.778	0.651
EP: Effective procurement	3	2.812	0.902	0.425	0.435	0.678

Source: Research Data (2019)

Further, correlations among the items within each of the factors as well as correlations among the composite scores of the extracted factor were performed to further verify the reliability of the factor analysis. It was found a significant correlation between items of the factors existed (see Table 4.19a-4.19c) which further indicates the suitability of conducting factor analysis.

Table 4.19(a): Correlations among Composite Scores of Extracted Factor 3

		CF_1	CF_2	CF_3	CF_4	CF_5	CF_8	CF_9
CF_1	Pearson Correlation	1.0000						
	Sig. (2-tailed)							
	N	241						
CF_2	Pearson Correlation	0.7011*	1.0000					
	Sig. (2-tailed)	0.0000						
	N	241	241					
CF_3	Pearson Correlation	0.7400*	0.6673*	1.0000				
	Sig. (2-tailed)	0.0000	0.0000					
	N	241	241	241				
CF_4	Pearson Correlation	0.3593*	0.4277*	0.3646*	1.0000			
	Sig. (2-tailed)	0.0000	0.0000	0.0000				
	N	241	241	241	241			
CF_5	Pearson Correlation	0.5330*	0.5083*	0.4544*	0.5323*	1.0000		
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000			
	N	241	241	241	241	241		
CF_8	Pearson Correlation	0.4060*	0.4470*	0.4465*	0.4273*	0.4029*	1.0000	
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000	0.0000		
	N	241	241	241	241	241	241	
CF_9	Pearson Correlation	0.4728*	0.4230*	0.5006*	0.2979*	0.3452*	0.5532*	1.0000
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	N	241	241	241	241	241	241	241

Table 4.19b: Correlations among Composite Scores of Extracted Factor 1

		PF_3	PF_4	PF_5	PF_6	PF_7	PF_8	PF_9	PF_10	PF_11
PF_3	Pearson Correlation	1.0000								
	Sig. (2-tailed)									
	N	241								
PF_4	Pearson Correlation	0.6270*	1.0000							
	Sig. (2-tailed)	0.0000								
	N	241	241							
PF_5	Pearson Correlation	0.5560*	0.6904*	1.0000						
	Sig. (2-tailed)	0.0000	0.0000							
	N	241	241	241						
PF_6	Pearson Correlation	0.5854*	0.6291*	0.6261*	1.0000					
	Sig. (2-tailed)	0.0000	0.0000	0.0000						
	N	241	241	241	241					
PF_7	Pearson Correlation	0.6287*	0.5437*	0.5528*	0.6504*	1.0000				
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000					
	N	241	241	241	241	241				
PF_8	Pearson Correlation	0.5707*	0.6054*	0.5090*	0.7276*	0.6643*	1.0000			
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000	0.0000				
	N	241	241	241	241	241	241			
PF_9	Pearson Correlation	0.5097*	0.5217*	0.4856*	0.6057*	0.5886*	0.6204*	1.0000		
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
	N	241	241	241	241	241	241	241		
PF_10	Pearson Correlation	0.5164*	0.5336*	0.5414*	0.5880*	0.5616*	0.5477*	0.6443*	1.0000	
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
	N	241	241	241	241	241	241	241	241	
PF_11	Pearson Correlation	0.5120*	0.4532*	0.4199*	0.4824*	0.5508*	0.5129*	0.5858*	0.5179*	1.0000
	Sig. (2-tailed)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	N	241	241	241	241	241	241	241	241	241

Table 4.19c: Correlations among Composite Scores Extracted of Factor 4

		IF_1	IF_2	IF_4	IF-7	IF_8	IF_9	IF_11
IF_1	Pearson Correlation	1.0000						
	Sig. (2-tailed)							
	N	241						
IF_2	Pearson Correlation	0.6571*	1.0000					
	Sig. (2-tailed)	0.0000						
	N	241	241					
IF_4	Pearson Correlation	0.108	0.2080*	1.0000				
	Sig. (2-tailed)	0.0942	0.0012					
	N	241	241	241				
IF_7	Pearson Correlation	0.2265*	0.1964*	0.2779*	1.0000			
	Sig. (2-tailed)	0.0004	0.0022	0.0000				
	N	241	241	241	241			
IF_8	Pearson Correlation	0.1551*	0.1396*	0.3094*	0.6929*	1.0000		
	Sig. (2-tailed)	0.0159	0.0302	0.0000	0.0000			
	N	241	241	241	241	241		
IF_9	Pearson Correlation	0.1700*	0.116	0.3456*	0.6855*	0.7763*	1.0000	
	Sig. (2-tailed)	0.0082	0.0722	0.0000	0.0000	0.0000		
	N	241	241	241	241	241	241	
IF_11	Pearson Correlation	0.0072	-0.0125	0.2824*	0.2285*	0.4122*	0.3913*	1.0000
	Sig. (2-tailed)	0.9110	0.8469	0.0000	0.0003	0.0000	0.0000	
	N	241	241	241	241	241	241	241

Table 4.19d: Correlations among Composite Scores Extracted of Factor 2

		EP_1	EP_2	EP_4
EP_1	Pearson Correlation	1.0000		
	Sig. (2-tailed)			
	N	241		
EP_2	Pearson Correlation	0.6576*	1.0000	
	Sig. (2-tailed)	0.0000		
	N	241	241	
EP_4	Pearson Correlation	0.4318*	0.5345*	1.0000
	Sig. (2-tailed)	0.0000	0.0000	
	N	241	241	241

Generally, these analysis results show that four distinct factors were underlying, the effectiveness of the LGAs in the procurement assignment and there were internal consistent among these factors.

4.10   Multiple Regression Model Analysis

In order to determine the factor that would influence the effectiveness of procurement assignment in LGAs several multiple linear regression models were estimated. Before estimations of the model, using STATA, factor scores were generated, and then multiple regression analysis was conducted Models were estimated to determine factors that influence effectiveness of the LGAs in procurement assignment were estimated for each objective that we intended to answer in this study.

4.10.1 The Influence of Internal Audit Competencies on Procurement Policies on Effective Procurement

The study hypothesized a positive influence of internal audit competencies on effective procurement assignment in LGA. The hypothesis that there is a positive

relationship between internal audit competencies and effective procurement assignment is stated as follows:

H1: *There is a positive influence of internal audit competencies on effective procurement assignments in LGAs.*

To determine the relationship between internal audit competencies and effective procurement assignment, a multiple linear regression was estimated. Generally, result on Table 4.20 indicate that about 23% (R^2=0.2288) of the variance of internal audit competencies on procurement assignment is explained by the independent variables. Further, there was effect size of 20% of the independent variable (adjusted R^2=0.1952), which is small according to Cohen (1988). Further, the model is statistically significant, F (10,230) =6.82, P=0.0001. This implies that overall model applied can statistically significantly predict competencies on procurement policies of internal auditing.

Results on Table 4.20 indicates further that internal audit experience in auditing procurement assignments is statistically significant at 1 percent level at increasing the effectiveness in procurement assignments by 0.825 (P=0.0020). This may be because experience exposes internal audit to different challenges that may affect procurement activity and they have the acquired knowledge on how to handle them. Further, number of staff in internal audit office is statistically significant at 10 percent and it increases effectiveness in procurement assignment by 0.2182 (P=0.092). These together implies that LGAs can be effective compared to the LGAS with audit having no experience on procurement assignments and a smaller number of staffs in the Internal audit office.

Table 4.20: Internal Audit Competencies and effective Procurement

Variable	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Qualifications on procurement audit	0.0332	0.2979	0.110	0.9110	-0.5537	0.6201
Trained in PPA	0.3902	0.2463	1.580	0.1150	-0.0951	0.8755
Experience in Procurement	0.8250	0.2667	3.090	0.0020***	0.2995	1.3506
Number of staffs in IA	0.2182	0.2380	1.740	0.0920**	-0.2507	0.6870
Attending training on procurement audit	0.3950	0.2538	1.560	0.1210	-0.1050	0.8950
Issue audit findings	0.3617	0.2960	1.220	0.2230	-0.2215	0.9448
Respond to IA recommendation	-0.2099	0.2293	-0.920	0.3610	-0.6617	0.2418
Attend job training	0.1912	0.2387	0.800	0.4240	-0.2792	0.6615
Training on IT	0.0463	0.2339	0.200	0.8430	-0.4145	0.5071
Law graduate	0.1949	0.2910	0.670	0.5040	-0.3785	0.7683
Constant	-1.0887	0.2864	-3.800	0.0000***	-1.6530	-0.5244

Number of obs
241
F(10, 230)
6.82
Prob > F
0.0000
R-squared
0.2288
Adj R-squared
0.1952
Root MSE
1.4408

Source: Research data, (2019)

Note: *** p<0.01, ** p<0.05, * p<0.1

4.10.2 The Influence of Internal Audit Procedures on Effective Procurement Assignments

The study hypothesized a positive influence of internal audit procedures on effective procurement assignment in LGA. The hypothesis that there is a positive relationship between internal audit procedures and effective procurement assignment is stated as follows:

H2: There is a positive influence of internal audit procedures on effective procurement assignments in LGAs

To determine the relationship between internal audit procedures and effective procurement assignment, the multiple regression models was estimated. Overall, results indicate that about 50% (R^2=0.5036) of the variance of internal audit competencies on procurement assignment is explained by the independent variables. Further, there was effect size of 48% of the independent variable (adjusted R^2=0.4797), which is medium according to Cohen (1988). Furthermore, the model is statistically significant, F (11,229) =21.12, P=0.000. This implies that overall model applied is statistically significant and can predict procedure on procurement assignment of internal audit.

In order to determine the effect of internal audit procedures on procurement assignment, a multiple regression was estimated. Results on Table 4.21 shows that generally, internal auditor knowledge on procurement cycle, internal audit unit reviews the procurement plan as required by professional body and PPRA, internal audit unit reviews user department initiation of the procurement requirements, internal audit unit reviews composition of tender board in the organization, internal

audit evaluates the work of the evaluation committee for submitted tender, internal audit unit reviews how the evaluation criteria submitted tenders were developed, and internal audit unit review the formation of contract management team positively influences effective procurement assignments.

Internal auditor knowledge on procurement cycle is statistically significant at 1 percent level. This implies that knowledge on procurement cycle increases effectiveness of LGAs on procurement assignments by 0.6669 (P=0.0000) compared to internal auditor without knowledge on procurement. This could be explained by the fact that knowledge on the procurement cycle is the requirement of the internal audit office, which positively affect procurement assignments and affect positively the LGAs effectiveness. Further, if the internal audit reviews on the procurement plan as required by professional board and PPRA is positive and statistically significant at 10 percent level. Results shows that reviews on the procurement plan increases effectiveness on procurement assignments by 0.3225 (P=0.0540) compared to their counterpart. Therefore, LGAs with internal audit who adhere to the plan as required by professional body increases effectiveness.

Also, internal audits that reviews user department initiation of the procurement requirement increases effectiveness of LGAs in procurement assignments. The said impact of internal audit reviews user department initiation of the procurement requirement is significant at 1 percent and it increases effectiveness by 0.7386 (P=0.0040). In addition, review of the composition of the tender board in the organization significantly leads into an increase in effectiveness of the LGAs in the procurement assignments by 0.5528 (P=0.0260). Lastly, a review of the formation of

contract is statistically significant at 10 percent level. The review of the formation of contract results into a 0.4315(P=0.0550) increase in LGAs effectiveness in the procurement assignment.

Table 4.21: Internal Audit Procedures and effective Procurement

Variable	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
Knowledge on procurement cycle	0.6669	0.1765	3.780	0.0000***	0.3192	1.0146
Reviews on procurement plan	0.3225	0.1668	1.930	0.0540**	-0.0062	0.6512
Reviews user department initiation	0.7386	0.2555	2.890	0.0040***	0.2352	1.2419
Reviews composition of tender board	0.5528	0.2472	2.240	0.0260***	0.0657	1.0400
Reviews involvement of tender board	0.1635	0.2139	0.760	0.4450	-0.2579	0.5850
Evaluates decisions	0.3542	0.2603	1.360	0.1750	-0.1587	0.8671
Evaluates the work	-0.3830	0.2570	-1.490	0.1380	-0.8894	0.1235
Evaluates evaluation criteria	0.4008	0.2479	1.620	0.1070	-0.0876	0.8891
Review communication	0.1113	0.2449	0.450	0.6500	-0.3713	0.5940
Reviews conduct of negotiations	0.0219	0.2679	0.080	0.9350	-0.5060	0.5497
Review formation of contract	0.4315	0.2240	1.930	0.0550*	-0.0098	0.8728
Constant	-1.1752	0.1222	-9.610	0.0000***	-1.4160	-0.9343
Number of obs						241
F(11,229)						21.12
Prob>F						0.0000
R-squared						0.5036
Adj-R-squared						0.4797
Root-MSE						1.1585

Source: Research data, (2019)

Note: *** p<0.01, ** p<0.05, * p<0.1

4.10.3 The Influence of Internal Audit Independence on Effective Procurement Assignments

The study hypothesized a positive influence of internal audit independence on effective procurement assignment in LGA. The hypothesis that there is a positive relationship between internal audit independence and effective procurement assignment is stated as follows:

H3: There is a positive influence of internal audit independence on effective procurement assignments in LGAs

To determine the relationship between internal audit independence and effective procurement assignment, the multiple regression models was estimated. Generally, results indicate that about 43% (R^2=0.4300) of the variance of internal audit independence on procurement assignments is explained by the independent variables. Further, there was effect size of 40% of the independent variable (adjusted R^2=0.4026), which is medium according to Cohen (1988). Further, the model is statistically significant, F (11,229) =15.71, P=0.000. This implies that overall model applied is statistically significant to predict independence of internal audit on procurement assignment.

Internal audit independence was thought to be important variable in explaining effectiveness of the LGAs in procurement assignments. To determine how internal audit independence, affect procurement assignment several variables that were thought to have effect on effectiveness were estimated against the effectiveness of the LGAs. General results show that internal auditor that are sufficiently removed from political pressure in carrying on audit assignment, internal audit unit free access

to documents, the internal audit that has clearly defined authorities, and internal audit sufficiently authorities positively and statistically significant impact effective procurement.

Internal audit removed from political pressure statistically and significantly increases effectiveness by 0.7220 (P=0.0000). The said increase is significant at 1 percent level. Further, internal audit with free access to document significantly increases effectiveness by 0.5531 (P=0.0030). In addition, internal audit with defined authorities and sufficiently authorities' increases effectiveness in LGAs procurement assignments by 0.6910 (P=0.0230) and 0.8753 (P=0.0000) respectively.

Table 4.22: Independence of Internal Audit and Effective Procurement Assignments

Variable	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Accountable to CEO	-0.1756	0.2797	-0.630	0.5310	-0.7268	0.3755
Report audit results to director	-0.0892	0.3073	-0.290	0.7720	-0.6948	0.5163
Reports audit results to council	0.1259	0.1813	0.690	0.4880	-0.2312	0.4830
Removed from political pressure	0.7220	0.2014	3.590	0.0000***	0.3253	1.1188
Free access to documents	0.5531	0.1861	2.970	0.0030***	0.1865	0.9198
Free access to those charged by governance	0.1806	0.1890	0.960	0.3400	-0.1918	0.5530
Internal audit charter	0.3430	0.2236	1.530	0.1260	-0.0975	0.7835
Defined responsibilities	0.1714	0.3142	0.550	0.5860	-0.4476	0.7904
Defined authorities	0.6910	0.3029	2.280	0.0230**	0.0943	1.2878
Sub-vote	-0.1002	0.1707	-0.590	0.5580	-0.4365	0.2361
Sufficiently authorities	0.8753	0.2702	3.240	0.0010***	0.3429	1.4077
Constant	-1.0515	0.2687	-3.910	0.0000***	-1.5810	-0.5220
Number of observations						
241						
F(11, 229)						
15.71						
Prob > F						
0.0000						
R-squared						
0.4300						
Adj R-squared						
0.4026						
Root-MSE						
1.2413						

Source: Research data, (2019)

Note: *** p<0.01, ** p<0.05, * p<0.1

4.10.4 Independence, Competencies and Procedures and LGAs effectiveness in Procurement

A multiple regression estimation for all items from the three factors were estimated and the overall result indicates that about 60% (R^2=0.6010) of the variance of internal audit independence on procurement assignments is explained by the independent variables. Further, there was effect size of 54% of the independent variable (adjusted R^2=0.5396), which is large according to Cohen (1988). Further, the model is statistically significant, F (32,208) =9.79, *P=0.0000.* This implies that overall model applied can statistically significantly predict independence of internal audit on procurement assignment.

The items from factors that determine effective procurement were estimated against effective procurement assignment index, and results on Table 4.23 shows that experience in procurement experience in procurement, attending job training on procurement audit, reviews user department initiation, evaluates the work, removed from political pressure, free access to document and sufficiently authorities are statistically significant at increasing the level of effectiveness in the LGAs.

Using STATA, factor scores for internal audit competencies, procedure independence and effectiveness procurement assignment were estimated. The score for each factor were estimated against the effective procurement assignment (see Table 4.24). Results show that internal audit competencies, procedures and independence in procurement assignment positively influences effective procurement assignments.

Table 4.23: Determinants of Effective Procurement

Variable	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Qualifications on procurement audit	-0.282	0.237	-1.19	0.235	-0.749	0.185
Trained in PPA	0.018	0.194	0.09	0.926	-0.365	0.401
Experience in Procurement	0.620	0.214	2.9	0.004***	0.198	1.041
Number of staffs in IA	0.191	0.195	0.98	0.329	-0.194	0.576
Attending training on procurement audit	0.049	0.207	0.24	0.813	-0.359	0.458
IA Issue audit findings to management	-0.136	0.238	-0.57	0.569	-0.606	0.334
Respond to IA recommendation	-0.014	0.186	-0.08	0.938	-0.380	0.352
Attend job training	0.399	0.188	2.12	0.035**	0.028	0.769
Training on IT	0.035	0.183	0.19	0.85	-0.327	0.396
Law graduate	0.224	0.238	0.94	0.348	-0.245	0.693
Knowledge on procurement cycle	0.244	0.188	1.3	0.196	-0.127	0.614
Reviews on procurement plan	0.256	0.170	1.51	0.133	-0.079	0.591
Reviews user department initiation	0.676	0.254	2.67	0.008***	0.176	1.176
Reviews composition of tender board	0.331	0.254	1.3	0.194	-0.170	0.831
Reviews involvement of tender board	0.084	0.213	0.39	0.694	-0.336	0.504
Evaluates decisions	0.299	0.258	1.16	0.248	-0.210	0.808
Evaluates the work	0.544	0.267	2.04	0.042**	-1.070	-0.019
Evaluates evaluation criteria	0.354	0.251	1.41	0.16	-0.141	0.850
Review communication	0.050	0.242	0.21	0.837	-0.428	0.527
Reviews conduct of negotiations	-0.124	0.262	-0.47	0.636	-0.641	0.393
Review formation of contract	0.339	0.223	1.52	0.129	-0.100	0.778
Accountable to CEO	-0.029	0.258	-0.11	0.909	-0.538	0.479
Report audit results to director	-0.112	0.285	-0.39	0.693	-0.674	0.449
Reports audit results to council	0.159	0.165	0.96	0.337	-0.166	0.484
Removed from political pressure	0.369	0.188	1.96	0.051*	-0.002	0.739
Free access to documents	0.351	0.176	1.99	0.048**	0.004	0.697
Free access to those charged by governance	0.236	0.177	1.33	0.185	-0.114	0.585
Internal audit charter	0.080	0.213	0.38	0.707	-0.340	0.500
Defined responsibilities	0.078	0.304	0.26	0.798	-0.522	0.678
Defined authorities	0.206	0.306	0.67	0.503	-0.398	0.810
Sub-vote	-0.149	0.157	-0.95	0.341	0.458	0.159
Sufficiently authorities	0.458	0.256	1.79	0.075*	-0.046	0.961
Constant	-1.509	0.291	-5.19	0.000	-2.082	-0.936
Number of obs 241						
F (32, 208) 9.79						
Prob > F 0.000						
R-squared 0.601						
Adj R-squared 0.540						
Root MSE 1.090						

Source: Research data (2019) Note: *** p<0.01, ** p<0.05, * p<0.1

Overall, results indicate that about 53% (R^2=0.5298) of the variance of internal audit independence on procurement assignments is explained by the independent variables. Further, there was effect size of 52% of the independent variable (adjusted R^2=0.5239*),* which is large according to Cohen (1988). Further, the model is statistically significant, F (3,237) =89.02, P=0.0000*.* This implies that overall model applied can statistically significantly predict independence of internal audit on procurement assignment.

Internal audit competencies increase effective procurement in the LGAs by 0.097 and it was significant at 5 percent level (P=0.012). Results further, shows that internal audit procedures and independences increases effective in procurement assignment by 0.336 (P=0.0000) and 0.276 (P=0.000) respectively.

Table 4.24: Determinants of Effective Procurement

Variable	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Competencies	0.097057	0.038483	2.52	0.012**	0.0212	0.1729
Procedures	0.335971	0.048032	6.99	0.000***	0.2413	0.4306
Independence	0.275805	0.049867	5.53	0.000***	0.1776	0.3740
Constant	1.45E-08	0.07139	0.00	1.000	-0.1406	0.1406
Number of obs						241
F (3, 237)						89.02
Prob >F						0.0000
R-squared						0.5298
Adj R-squared						0.5239
Root MSE						1.1083

Source: Research data, (2019)
Note: *** p<0.01, ** p<0.05, * p<0.1

4.11 Summary of the Chapter

All analysis and tests performed in this chapter were done with STATA v.14 using the research methods and research instruments detailed in chapter three of this study. The data used were put into tests to decide/determine if the research questions in the chapter one were correctly designed. Generally, the analysis and tests revealed that the independent variables of the study are so influencing the dependent variable, but they are weak.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1   Overview

This chapter discusses the finding of the study based on the objectives of the study. The discussion is solely based on the data analysis that we conducted in chapter four. This will help to understand how the research hypothesis were tested and therefore a thoroughly understanding of the impact of internal audit competencies, procedures and followed with independence results into the effective procurement assignment. To test the research hypothesis, the study did some descriptive analysis on some demographic characteristics of the respondents. The study further, conducted some tests to multiple linear regression model to see if the model does obey the assumptions that are to be met for the multiple linear regression to be done.   Finally, model estimation was done in order to test the research hypothesis.

5.2   Internal Audit Competence Factors and Procurement Effectiveness of LGAs

The study aimed to understand the relationship between internal audit competencies factors and effective procurement assignments of the LGA in mainland Tanzania. The empirical results presented in chapter four (see Table 4.20) on the internal audit competencies factors indicate that internal auditors having experience in procurement assignment positively influence the effectiveness in procurement assignment. This indicates that it is important for internal audit to have competencies related to experience to ensure effectiveness in procurement assignments.

It has been further indicated that experience in procurement determines their competencies and therefore influences the procurement effectiveness. The outcome in table 4.20 above is an indication that experienced auditors develop and review quality procurement programs, procedures and can validate other procedures with the aim of meeting effectiveness in procurement assignments. The experienced auditor performs audit assignment in procurement to validate compliance with procurement laws.

This finding is consistent with study by Tubbs (1992), who revealed that auditors' experience in procurement facilitate the auditors in carrying on the audit assignments in the manner that contribute to the entity's value, and the entity enjoy the value for its money. Experienced auditors in the audit function will enhance competencies in LGAs and assist management to achieve the goal of the organization.

In addition, number of staffs in the internal audit unit was also found to be significantly affecting procurement assignment in the LGAs. This could be explained by the fact that, if the number of internal auditor's increases, the possibility of having internal audits offices with multidisciplinary staffs' increases. Multidisciplinary staffs increase the possibility of effective procurement in the LGA. This important finding is supported by some previous studies such as (Ndoro, 2014; Plant *et al*., 2013). (Plant *et al*., 2013) study found that a combination of auditors having mult-knowledge tend to be more productive and increase competencies in the organization. The study by Ndoro uncovers the truth that well-coordinated multidisciplinary team working provides high- quality results in the organization, which can also be applied to the local government authorities in Tanzania.

This study indicates that there are no other professions rather than accountants who have been employed as internal auditors in LGAs. The Tanzania Government policy through the treasure establishment circular on the carder under ministry of finance shows that only Accountants are employed as internal auditors in LGAs. This is contrary to the best international practices and the professional practices framework adopted by the Government of the United Republic of Tanzania. This means that other professions such as lawyers, ICT specialists, procurement specialists and many other depending to the nature of the entity's business can be employed as internal auditors.

Consistently, the regression of the composite competencies factors in procurement assignment found that competencies have positive and significant influences in the effectiveness of the procurement assignment by the LGAs (see Table 4.24). Also, the overall regression found further the importance of experience in procurement assignments and attending training on procurement audit on effective procurement assignment (see Table 4.23).

Training on procurement provides the internal auditors with the expertise they require to fulfill their auditing role in LGAs and by so doing this bring the positive impact on procurement audit assignments. Training is the cornerstone of effective procurement assignment because it makes internal auditors more efficient and productive. Internal auditors training on public procurement Act provides opportunities for the auditors to learn an acquired procurement skills and to enable them apply the skills in several auditing stages in the assignment.

Findings from this study resembles to the findings by (Alzeban and Sawan, 2013; Baharud-din *et al.*, 2014; Njeru, 2015; Plant *et al*., 2013; Shamsuddin *et al*., 2015).

However, Matto (2017) associated weak internal audit control results into staff lacking capacity and integrity.

Furthermore, this result resembles to (Sudsomboon and Ussahawanitchakit, 2009) which states that audit knowledge and professional experience in auditing contribute to audit competencies leading to positive relationship with effectiveness in auditing assignment. The same has a support from Intakhan and Ussahawanitchakit (2010), who conducted study found that competencies in auditing contributed much in the effectiveness of auditing assignment. The role of the audit experience cannot over emphasis in the audit assignments in the world at large

Table 4.23 shows overall determinants of effective procurement assignments regarding to internal audits. Training is one of the elements in determining the audit effectiveness. The study wanted to know the effect of on job training on the internal audit competencies in IA procurement assignments. As it shown in (Table 4.23), the overall results indicate that there is positive and significance relationship between training and IA competencies. The relationship affects the effectiveness of the internal audit assignments.

Kim and Ployhart (2014), who concluded that training has a positive relationship in a firm productivity and performance, support the results from the research. According to (Alflahat, 2017), trained audit staff can plan, organize and coordinate audit activities, procurement assignment included. The staff determines the reliability, reality and integrity of the procurement information. Trained personnel have strong and relevant impact on the organization performance and entity's resources, hence affect procurement audit assignments.

Njeru (2015), defined training as the process of identifying and developing the necessary knowledge in our case procurement skills required in LGAs. Training is learning so that the audit function improves auditing assignments in our LGAs. Training has positive influence on the most of items in Table 4.20 that are defining the competencies of audit in carrying procurement assignment effectively. Dittenhofer (2001) found that internal auditing effectiveness is affected by the quality of internal audit procedures, which are a product of training. In a nutshell, the competencies in audit contribute in achieving LGAs goals by informing the management on how to improve the controls in procurement assignments.

5.3   Effect of Internal Audit Procedures on Procurement Effectiveness of the LGAs

To establish the relationship between internal audit procedures on procurement effectiveness, the study at hand estimated the multiple linear models. Empirical results show that effective procurement assignment is highly associated with internal audit procedures on procurement assignments. Factors that turn out to have positive influence on effective procurement are to be discussed in this section. These factors include internal auditor knowledge on procurement cycle, internal audit unit reviews the procurement plan as required by professional body and PPRA and internal audit unit reviews user department initiation of the procurement requirements.

Other factors are internal audit unit reviews composition of tender board in the organization, internal audit evaluates the work of the evaluation committee for submitted tender, and internal audit unit review the formation of contract management team (see Table 4.21). Furthermore, results on Table 4.23 shows that there was

consistent results that shows that reviews user department initiation and evaluates of the work influences procedures that are required for effective procurement.

Due to the facts that among the roles of internal audit unit are advisory role to entity's management, understanding of the critical process of key steps in procurement of goods, works and services by the auditors is crucial for the effectiveness of internal audit function. Procurement processes comprises need recognition, need specifications of the item, options for sources, prices and the terms involved, orders and delivery of item, timelines of the item, receiving and inspection of the item, payment schedules and record maintenance of the ordered item. Loiacono and Muhumuza (2018) concurred with the results from this study when they state that audit may have been successful in reducing the risk of corruption and other ineffective in procurement assignments if and only if the procurement procedures are adhered.

According to Loiacono and Muhumuza (2018), Understanding clearly the procurement circle by auditors will uncover all procurement processes, bring the transparency, and enable anti-corruption activities in procurement processes. Generally, as it can be noted in table 4.21, there is a strong positive relationship between procurement cycle and effectiveness of procurement assignments. This study revealed that auditors have little knowledge on the contents and details of the procurement cycle as Loiacono and Muhumuza (2018) noted in their study.

Regarding the procurement plan, the finding reveal that between the procurement plan and audit procedures the relationship is of paramount significant. There is positive relationship as is evidenced with table 4.21. (Kiage, 2013) concluded that procurement

plan has higher and positive impact on effective procurement assignments. The plan influences the allocation of procurement resources in the entity. The poor planning on procurement resources lead to poor procurement performance in LGAs. The internal audit function must review procurement plan as per procurement laws to ascertain its fitness in term of resources allocation to attract value for money in the entity.

Reviews user department initiation regarding the audit process in procurement assignments is a vital stage in ensuring the effectiveness of the audit function. As shown in Table 4.21 above, the relationship between internal audit unit reviews user department initiation of the required goods, works and services and effective procurement assignments is positive and significant. Internal audit function being unaware of reviewing what user department requested and ordered to be supplied and received for its final use lead to ineffectiveness of procurement assignments. The result of this study agrees with (Kakwezi and Nyeko, 2010) which concluded that for not observing the proper process and procedures reviewing of user initiation requirement included contribute to ineffective of procurement.

Right composition of tender board is vital for the betterment of procurement function. The audit function in the procuring entity must evaluate the board when carrying on its assignments. This study as it is seen in Table 4.21 shows that there is a positive relationship between IA reviews of tender board composition as a procedure on procurement audit assignment and effective procurement assignments. Tender board which is technically competent and skilled ensure that the whole procurement processes adhered to laws, therefore internal audit function must ensure the availability of such tender board. The result from this study agrees with (Tyembo,

2013). Furthermore, this result confirmed study conducted by (Ngugi and Mugo, 2012), which concluded that procedures including this one influence the processes.

Several other studies found that for effective procurement, Internal Audit procedures are highlighted to be importance. For instance (Etse and Asenso-Boakye, 2014) highlighted the importance of monitoring the whole procurement process in order to avoid the danger of undesired results. Further, (Pinto, 2015) emphasized the importance of following procurement methodology to avoid risks of wastage of public resources. The internal audit procedures on procurement assignments in LGAs enhance the contribution of internal audit in achieving the goals of the government of ensuring that the society welfare is improved, and resources are used wisely.

5.4   Internal Audit Independence Factor effect on Procurement Effective Assignment

The study further hypothesized that internal audit independence is positively associated with effective procurement assignments. Empirical results support the hypothesis by showing number of factors that influences effective procurement assignments. These factors include removal of internal audit from political pressure, which positively affects the procurement assignment. This could be explained by the fact that independence increases internal audit ethical conducts, which could influence effectiveness.

Moreover, free access to document by internal audit would positively affects procurement activities. These would make the procurement to be conducted with high integrity with access to required information. In addition, internal audit having clearly

defined authorities would imply independence and therefore effective procurement. These results are presented on (Table 4.22). Consistent findings were revealed for composite on independence factor (Table 4.24) and on the overall regression that shows removed from political pressure and free access to documents increases independence of Internal audit (see Table 4.23).

Findings from this study yield similar results to study by (Kurniawati et al, 2018) who found a positive relationship between internal audit independence and the effective internal audit function which automatically has impact on procurement assignment. Also the study by (Cohen and Leventis, 2013) on effects of municipal, auditing and political factor concurred with the findings of this study. It was argued that audit delay is the product of the political influence in LGAs this automatically affect non-compliance with procurement law and regulations.

A study by Belay (2007) and the best practices and standards by IAA emphasis that auditors must be independent in mind and in appearance. Independence is crucial for reliability and has strong influence on performance effectiveness in procurement assignments. (Mihret and Yismaw, 2007) concurred with this study by concluding that IA effectiveness is vigorously influenced by management support by providing the necessary audit resources (funds) as it evidenced with Table 4.22. Independence of the internal audit function is well elaborated in the internal audit charter, whereby both auditee and auditor sign the document.

Further, Arena and Azzone (2009; Baharud-din *et al*. (2014) Cohen and Sayag (2010) noted that management support could have influence on independence of internal audit. However, Shamsuddin *et al* (2014) also noted that the independence of internal

audit is still a dream. On whether internal auditors are sufficiently removed from political pressure in undertaking procurement audit assignments, the respondents' perception in this study indicates that politics affect much the independence of the auditors. This is a positive relationship, the higher the political interference the higher the ineffectiveness of the auditors in carrying procurement assignment, vice versa is the truth. Stewart and Subramaniam (2010) had the same conclusion when they examined whether auditors' opinions are affected by political and economic influences from the governments. These studies hypothesize that there is a positive relationship between LGAs internal auditors ineffective in auditing procurement and ineffective of procurement performance (assignment) in LGAs. Further, it has highlighted the importance of the management support in ensuring that there is independence of the internal audit in the procurement processes (Arena and Azzone, 2009; Cohen and Sayag, 2010).

CHAPTER SIX

CONCLUSION, RECOMMENDATIONS, AND AREAS FOR FURTHER STUDY

6.1   Overview

The objective of the study was to examine the contribution of the internal audits on Procurement assignments in selected mainland Tanzania Local Government Authorities. The study further, aimed at examining competencies of internal audit function in carrying out the procurement assignments in mainland Tanzania's LGAs, to assess the appropriateness of internal auditing procedures on procurement assignments in mainland Tanzania's LGAs, and to evaluate the extent of independence of the internal audit function for executing procurement assignments in mainland Tanzania's LGAs. The study used the Agency and the Stewardship theories and also it used a positivism philosophy.

The result of this study based on 241 respondents obtained from office of Controller and Auditor General (CAG), Ministry of finance, Public Procurement Regulatory Authority (PPRA) and Local Government Authorities (LGAs) in Mainland Tanzania. STATA v. 14 was used for data analysis. This chapter intends to present key findings, conclusion, and recommendation and suggest the area for further research. In this chapter, implication of the study and it is contribution is highlighted. Limitation of the study will be also presented.

6.2   Conclusion

General findings of the study show that internal audit competencies on procurement policies (law), internal audit procedures on procurement assignment and independence

of internal audit positively influences effective procurement. Specific objectives of the study also conclude as it shown in the following sections.

6.2.1   Internal Audit Competence and Effective Procurement Assignments

The study intended to examine the impact of internal audit competencies on procurement policies on effective procurement. Findings revealed that there is positive effective of internal audit competence and effective procurement. This could be explained by the fact that competence on laws will render to less or no misconduct in the procurement assignment. This is so because internal auditors are expected professionally to apply appropriate skills and knowledge combined adequately with experience.

Further, the study identified that internal auditors having the necessary experience to audit procurement assignment is important. However, the study noted that the auditors are incompetent in procurement assignment. Generally, internal auditors in the local government authorities in mainland Tanzania lack Public Procurement Act training, experience and their numbers are in adequate. These three elements are very cruel in forming the competence in procurement audit assignments.

Internal audit units have to ensure that only the auditors who are competent are employed to carry on procurement audit assignments. Performance of these audit assignments and preparation of the audit reports require due professional care by the persons possessing adequate training on procurement as well as auditing processes and experience. Likewise, the Tanzania government should consider reviewing the Schemes of Service for carders under the Ministry of Finance of 2015. Other

disciplines and professions than Accountants should be considered to be employed as internal auditors. By so doing i.e. employing mult-professions skilled persons, the Tanzania government will be adhering to the international standards and internal audit best practices.

6.2.2   Internal Audit Procedures and Effective Procurement

Similarly, it was found that internal audit procedures on procurement assignments positively affect the effective procurement assignment. The specific factors to pay much attention on the effectiveness of procurement assignment which fall under internal audit procedures includes knowledge on procurement cycle, reviews of procurement plan, reviews of user department initiation, reviews of composition of tender board, evaluate the work, reviews evaluation criteria and review of formation of contract. Generally, the study has revealed that the internal auditors in LGAs lack procurement circle knowledge.

This reflects that for auditors to be conversant with procurement circle in public sector, it is important for internal audit to follow highlighted procedures to ensure that there is effective procurement in their LGAs. Therefore, LGAs are supposed to ensure that their internal audit staffs have sufficient knowledge on the procedures, which will result into well performing the procurement audit assignment, which will lead to the effectiveness in procurement of goods, works and services in the LGAs.

6.2.3   Internal Audit Independence and Effective Procurement

In addition, internal audit independence positively affects effective procurement in the LGAs. If internal audit is independent, they are free from external influences, which could make them perform their duties not according to their professional requirement

but wanting to comply with the influence from external influences. Specific factors which influences effective procurement positively in the LGAs include removal from political pressure, free access to document, having well defined responsibilities and if internal audit is sufficiently funded.

These factors could have been explained and resolved through the internal audit charter, which act as the constitution of internal audit or terms of reference for internal audit. The charter shows why it is there, who is responsible for it, the contents of the charter including it is independence. Internal audit function to provide objective and unbiased opinion and assurance to procurement assignments. It is important to have access to records, personnel and physical property across to the LGA. Responsibility for both auditee and auditor in maintaining healthy communication, including auditee supporting auditor financially is a must for success of procurement audit.

Therefore, LGAs and the government through the Ministry of Finance and public service department under the President Office need to support the internal audit offices by providing enough resources, ensuring that auditors are not interfered in the audit processes politically or otherwise and they have access to relevant documents. Independence stands for auditors being able to report on material facts, uninfluenced by any favor or frown. In order to have effective procurement in LGAs independence of the auditors is important.

6.3   Recommendation for Policy Implications

Findings from this study have several implications on internal audit and effective procurement. The study recommends policy makers; government should ensure that internal audit is competent in procurement assignments. The stakeholders LGAs

included should strive to ensure that internal auditors are trained on public procurement Act and other related laws. The number of internal auditors should be increased to match with the activities in LGAs. The auditors should be exposed to different environment to acquire the necessary experience.

Procurement procedures must be known to each internal auditor in LGAs. The auditors must be conversant with the procurement processes, from the first point of initiation to the end of receiving goods, works and services. Training on procurement circle (procurement procedures) should be a focal point as it is the heart of all procurement processes.

The independence of internal auditors should facilitate auditors to determine whether the existing system of internal control in procurement process is in harmony with the structure of LGAs, enable auditors to review each control in procurement processes and analyses them in terms of costs and benefits. The auditors should be independent to assess the systems established to ensure compliance with those policies, plans, procedures, laws, and regulations, which have a significant impact on operations and reports and should determine whether LGAs comply. The study at hand highlights the required factors to be implemented in each as explained in detail in chapter four. Therefore, LGAs should ensure competence, independence and procedures for laws in order to ensure effective procurement.

6.4   Study Implications

6.4.1 Theoretical Implications

The findings and discussions from the study indicate that there is theoretical implication. The limitations of the Agency theory of the ignorance of the

organizational complexity and non-consideration of economic factors can be eliminated by the introduction of the Stewardship theory. This is because the Stewardship theory bring in the interaction of the society. The Stewardship concentrates on the needs of the society, the world in large and shareholders are included. The Agency theory gives the weight only to the interests of shareholders.

This means that all three independent variables in the study could have been developed from the Stewardship theory however, the independence and competency constructs came from the Agency theory. The two variables are so important having a significant influence on the contribution of internal audit on procurement assignments in LGAs. In a similar way, the finding maintains that internal audit (or) who is an agent, for the sake of the study, need to be motivated to align his interest to the principal. Since the independence and competency only cannot make internal audit effective, the study eventually collaborates with the stewardship theory by taking procedure as a variable for study. Through the study, it has been confirmed that these three variables, namely internal audit independence, internal audit competency and appropriate internal audit procedures in procurement all are influencing internal audit assignments in procurement in LGAs.

Theoretically, the study noted two important issues, the first is the experience of internal auditors in procurement assignment is an important element and is stronger in term of the influence than any element among the competency's factors and other factors in the variables in the study. The second issue is the review of user department initiation of procurement requirements by auditor(s), which is a factor among the procedures' factors in the IA procedures on procurement assignments. The two factors

within the studied independent variables were found to be so influential in the effective procurement assignments.

6.4.2   Practical Implications

The findings from the study will assist LGAs, who are employers of internal auditors to have the right staffing in their organization who will apply an appropriate auditing procedure. The right staffing comprises both the right number of employees and the right skills. IA units should have a mixed skilled employee of different professions and not only accountants. Training and acquisition of new knowledge to all stakeholders is a must for improvement of internal audit function in LGAs. LGAs through the Ministry of Finance must fund sufficiently internal audit sub-votes. Insufficient funding limit almost everything in internal audit performance.

6.5   Limitations of the Study and Areas for Further Studies

Results from this study reveals very important contribution to the literature and bring out very important recommendation to be followed by the government and LGAs. Despite having lucrative results, one is cautioned on the limitation that results from this cross-sectional study.

The study at hand used data from LGAs to inform the effectiveness in the procurement of the LGAs. Future study should consider using Ministries, Departments and Agencies (MDAs) to have information on their effectiveness. A comparative study can be done to compare central government and local government the effectiveness in procurement assignments or comparative study can be done between private sector and public sector effectiveness.

Finally, the study used quantitative data only. Using a mixed methodology by including qualitative data analysis could be more informative as quantitative data restrict responses and using qualitative data could result into more information from the respondents. Therefore, the study at hand, recommends that future studies should consider using both quantitative and qualitative data in order to have more rigorous and comparative information from the respondents.

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VfNAP0u2jh3LzMBnoy9XrMkLKKzidYUdoCezTI6dY4LYNQg==&crl=c.

APPENDICES

APPENDIX I: Survey Questionnaire

Dear Respondent,

The purpose of this questionnaire is to obtain information that will assist the researcher to assess the contribution of Internal Audit on procurement assignment in public entities (LGAs). The questionnaire will take an average of 20 minutes of your time to complete. The information to be collected through these survey questionnaires is purely for academic purposes, the recommendations from the research may be beneficial to your organization. Your response will be treated with utmost confidentiality.

If you have any question about the questionnaire or the research in general, please feel free to contract the researches through the following contact:

Mr. Joseph Iswante David, Email: joseph.iswante@gmail.com, P.O. Box 78459, Dar es Salaam, Mob: 0784-318331

Appendix II: Questionnaires

Section 1: General Introduction		
1.	Name of Entity	
2.	Name of Official (Optional)	
3.	Position of respondent	
4.	Please, indicate your highest level of education	
	a) Ordinary Level Secondary School	
	b) Advanced Level Secondary School	
	c) Diploma	
	d) Advanced Diploma/First Degree	
	e) Masters' Degree	
	f) Other, please (specify)	
5.	Please, indicate your level of professionalism (you can tick more than one).	
	a) Diploma in Accountancy	
	b) Advanced Diploma/First Degree in Procurement/Accountancy	
	c) Professional- CPA	
	d) Professional-CPSP	

e)	Degree in laws.		
f)	Others, please (specify)		
6.	Years of experience in management		
a)	0-3 years		
b)	4-6 years		
c)	7-10 years		
d)	11-20 years		
e)	21-30 years		
f)	Above – 30 years		
7.	Number of staff in internal audit unit (in case of oversight institution it is opinion)		
a)	1		
b)	2		
c)	3		
d)	4		
e)	5		
f)	Others, please(specify)		

Section 2: Internal Audit Competencies on Procurement Policies (law)

Please tick (√) the relevant statement as applied to competency on Procurement Policies. Kindly, please make your personal most objective view as you can.

Note:*1= Strong disagree, 2 = Disagree, 3 = Neural, 4 = Agree, 5 =Strong agree*

S/N	STATEMENT	1	2	3	4	5
1.	Internal Auditors possess qualifications necessary to carry out procurement audit.					
2.	Internal Auditors have necessary experience to audit procurement assignments.					
3.	Internal Auditors have training on procurement Act					
4.	The number of Internal Audit Staff in the organization is adequate.					
5.	At least every year Internal Auditors attend training on procurement Audit.					
6.	Internal Audit Unit issue audit findings to management at least once in three months.					
7.	The management responds positively to Internal Auditors' recommendations.					
8.	Staff attend on the job training at least twice a year					
9.	Internal Auditors trained on information technology					
10.	At least one Internal Auditor is a law graduate					

Section 3: Internal Audit procedures on procurement assignments

S/N	STATEMENT	1	2	3	4	5
1.	Internal Auditors are knowledgeable on Procurement cycle					
2.	Internal Audit Unit reviews the procurement plan as required by professional body and PPRA.					

3.	Internal Audit Unit reviews user department initiation of the procurement requirements.					
4.	Internal Audit Unit reviews composition of Tender Board in the organization.					
5.	Internal Audit reviews the involvement of the Tender Board on the contracts awarded.					
6.	Internal Audit Unit evaluates decisions for the procurement method applied in the acquisition of the specific tender.					
7.	Internal Audit evaluates the work of the evaluation committee for submitted tenders.					
8.	Internal Audit Unit reviews how the Evaluation criteria for submitted tenders were developed.					
9.	Internal Audit Unit reviews communication of tender awards to suppliers/services providers who are about to win the said tenders.					
10.	Internal Audit Unit reviews the conduct of negotiations with bidders before awarding the tender.					
11.	Internal Audit Unit reviews the formation of contract management team.					

	Section 4: Independence of Internal Audit					
S/N	**STATEMENT**	**1**	**2**	**3**	**4**	**5**
1.	Internal Audit Unit is accountable to Chief Executive Officer Director.					
2.	Internal Audit Unit report the audit results to Director					
3.	Internal Audit Unit report audit results to council					
4.	Internal Auditors is sufficiently removed from political pressure in caring on audit assignment					
5.	Internal Audit Unit has free access to documents					
6.	Internal Audit Unit has free access to those charged with Governance.					
7.	The council has Internal Audit Charter					
8.	The Internal Audit charter has clearly defined responsibilities of internal audit.					
9.	The Internal Audit Charter has dearly defined authorities of Internal Audit Unit					
10.	The Internal Audit unit has its own sub-vote					
11.	The Internal Audit unit sub-vote is sufficiently funded					

S/N	STATEMENTS	1	2	3	4	5
	Section 5: Effective Procurement Assignments					
1.	LGA comply with procurement legislations					
2.	LGA minimize procurement costs					
3.	LGA procure the required goods, works and services					
4.	LGA timely acquire goods, work and services					

Thank you very much for your contribution to this research

APPENDIX III

ZONE	REGION	TYPES OF LGAs
Central	Dodoma	- Dodoma City Council - Bahi District Council - Chemba District Council - Mpwapwa District Council - Chamwino District Council - Kondoa district Council - Kongwa District Council
	Singida	- Singida District Council - Manyoni District Council
	Tabora	- Nzega District Council
Coastal	Dar es Salaam	- Kinondoni Municipal Council - Temeke Municipal Council - Kigamboni Municipal Council - Ubungo Municipal Council
	Coast	- Kisarawe District Council - Bagamoyo District Council - Kibaha District Council
Northern	Manyara	- Babati District Council - Babati Town Council
Southern Highland	Njombe	- Njombe Town Council - Wanging'ombe District Council - Njombe District Council
	Songwe	- Songwe District Council
Lake	Mara	- Tarime Town Council - Bunda Town Council - Tarime District Council - Musoma District Council

Appendix IV: Clearance Letters

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

P.O. Box 23409
Dar es Salaam, Tanzania
http://www.openuniversity.ac.tz

Tel: 255-22-2668992/2668445
ext.2101
Fax: 255-22-2668759
E-mail: dpgs@out.ac.tz

Our Ref: HD/B/622/T.11

Date:11ᵗʰ March 2019.

The Permanent Secretary,
President office, Regional Administration and local Government,
P o. Box 1923,
Dodoma.

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No. 55 in the official Gazette. The act was however replaced by the Open University of Tanzania charter of 2005, which became operational on 1st January 2007. In line with the later, the Open University mission is to generate and apply knowledge through research.

To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. DAVID, Joseph Iswante RegNo:HD/B/622/T.11** pursuing Doctor of philosophy in Business Studies **(PhD -Business).**We here by grant this clearance to conduct a research titled *"The contribution of internal audit on procurement assignments."*He will collect his data in the following regions Dar es salaam and coastal; Kigoma and Tabora;Mara and Mwanza;Dodoma and Singida;Mbeya and Njombe;Manyara and Arusha from 15ᵗʰ March 2019 to May 2019.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thanks you in advance for your assumed cooperation and facilitation of this research academic activity.
Yours sincerely,

Prof. Hossea Rwegoshora
For: VICE CHANCELLOR
THE OPEN UNIVERSITY OF TANZANIA

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

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ext.2101
Fax: 255-22-2668759
E-mail: dpgs@out.ac.tz

Our Ref: HD/B/622/T.11

Date:11ᵗʰ April 2019.

Chief Executive Officer,
Public Procurement Regulatory Authority (PPRA),
P o. Box 2865,
Dodoma.

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No. 55 in the official Gazette. The act was however replaced by the Open University of Tanzania charter of 2005, which became operational on 1st January 2007. In line with the later, the Open University mission is to generate and apply knowledge through research.

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In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thanks you in advance for your assumed cooperation and facilitation of this research academic activity.
Yours sincerely,

Prof. Hossea Rwegoshora
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Our Ref: HD/B/622/T.11

Date:11th April 2019.

Controller and Auditor General,
P o. Box 950,
Dodoma.

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No. 55 in the official Gazette. The act was however replaced by the Open University of Tanzania charter of 2005, which became operational on 1st January 2007. In line with the later, the Open University mission is to generate and apply knowledge through research.

To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. DAVID,Joseph Iswante RegNo: HD/B/622/T.11** pursuing Doctor of philosophy in Business Studies **(PhD -Business)**.We here by grant this clearance to conduct a research titled *"The contribution of internal audit on procurement assignments."*He will collect his data in Dar es salaam/coastal, Kigoma/Tabora,Mara/Mwanza,Dodoma/Singida,Mbeya/Njombe,Manyara/Arusha Regions from 11th April 2019 to 30th June 2019.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thanks you in advance for your assumed cooperation and facilitation of this research academic activity.
Yours sincerely,

Prof. Hossea Rwegoshora
For: VICE CHANCELLOR
THE OPEN UNIVERSITY OF TANZANIA

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

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Our Ref: HD/B/622/T.11

Date:11th April 2019.

Permanent Secretary,
Minisrty of Finance,
P o. Box 2802,
Dodoma.

RE: RESEARCH CLEARANCE

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