Factors Affecting Effectiveness of Public Procurement Auditing: Evidence from Selected Public Sector Institutions in Ethiopia

ZELEKE TAFESE

February, 2018
Factors Affecting Effectiveness of Public Procurement Auditing: Evidence from Selected Public Sector Institutions in Ethiopia

A Project Submitted to the Department of Accounting & Finance at Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of MA in Accounting and Auditing

By

ZELEKE TAFESE

February, 2018
FACTORS AFFECTING EFFECTIVENESS OF PUBLIC PROCUREMENT AUDITING: EVIDENCE FROM SELECTED PUBLIC SECTOR INSTITUTIONS IN ETHIOPIA

By

ZELEKE TAFESE

Name and signature of Members of the Examining Board:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairperson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wollela Abahodie (Ph.D)</td>
<td>Adviser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int. Examiner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examiner</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENT

First and foremost, I want to thank the Almighty God and his beloved mother St. Virgin Mary for abundant Love, every blessing, protection, and provision of good health and for granting me the gift of life.

I would like to express my deep gratitude to my advisor Dr. Wollela Abhodie for her unreserved guidance, advice, critical comments, persistent help and constructive suggestions during the study. Besides, her diligent, fascinating guide, good advice, constructive criticism, support, and flexibility are learnable.

I feel honored to acknowledge her tireless effort of my family specially my Wife Amarech Mesifen. In addition, I am so thankful to Ephrem Zeleke and Afomiya Zeleke for they gave me great moral and sweet love during my study. Each step of the work would be difficult without our unity, love and support to each other, my debts are innumerable.

Finally, I am also thankful to my friend Feqadu Agonafer who showed me their concern for my success. Thank you all for everything. I thankfully acknowledge the overall support, advice and help I got from Betelehem Maru and Abeje Bekele for their unrestricted technical and questionnaire collection supports. Most important, this thesis would not have been possible without the support of the exceptional people who are PPA, Addis Ababa Administration Head procurement work process and sub city employees.
# TABLE OF CONTENTS

LIST OF FIGURES ......................................................................................................................... I

LIST OF TABLES ............................................................................................................................ I

LIST OF ABBREVIATIONS ............................................................................................................... II

ABSTRACT ...................................................................................................................................... 1

CHAPTER ONE .............................................................................................................................. 2

1 Introduction ................................................................................................................................. 2

1.1 Background of the study ......................................................................................................... 2

1.2 Statement of the problem ....................................................................................................... 3

1.3 Objective of the Study ........................................................................................................... 6

1.5 Significance of the study ........................................................................................................ 6

1.6 Scope of the Study ................................................................................................................. 7

1.7 Limitation of the Study ........................................................................................................ 7

1.8 Organization of the study ...................................................................................................... 7

CHAPTER TWO ............................................................................................................................ 8

2 LITERATURE REVIEW .............................................................................................................. 8

Introduction ................................................................................................................................... 8

2.1 Theoretical review ................................................................................................................ 8

2.1.1 Public & private sector procurement .............................................................................. 9

2.1.2 Determinant of public procurement audit ..................................................................... 11

2.1.3 Record Management ....................................................................................................... 12

2.1.4 Auditors’ Competency ................................................................................................... 14

2.1.5 Auditor’s Independence .................................................................................................... 17

2.1.6 Resource Constraints ...................................................................................................... 19

2.2 Empirical Review ................................................................................................................. 20
2.3 Conceptual Framework

2.4 Research Gaps and conclusion

CHAPTER THREE

3. Research Methodology

3.1 Research objectives

3.2 Research Approaches

3.3 Research approaches adopted

3.3.1 Quantitative aspect: survey

3.3.2 Qualitative aspect: in-depth interview and documentary analysis

3.4 Link between Research Objective and Data Sources and conclusion

3.5 Ethical Consideration

3.6 Validity and Reliability

3.6.1 Validity

3.6.2 Reliability

3.7 Conclusions

CHAPTER FOUR

4. Data Presentation, Analysis and Discussion

4.1 Results (survey and in-depth interview)

4.1.1 The Response Rate

4.1.2 Demographic Characteristic of the Survey Respondents

4.1.3 Record Management and its effects on effectiveness of procurement auditing

4.1.4 Auditors Competency and its effects on effectiveness of procurement auditing

4.1.5 Auditors Independence and its effects on effectiveness of procurement auditing

4.1.6 Resource constraint and its effects on effectiveness of procurement auditing

4.1.7 Effectiveness of procurement Auditing
4.1.8 Tests and Analysis to examine the factors of effectiveness of procurement auditing  49

A. Descriptive Statistics  49

4.1.8 Correlations Analysis  50

4.2 DISCUSSION  51

4.2.1 Record Management  51

4.2.2 Auditors Competency  52

4.2.3 Auditors Independent  53

4.2.4 Resource Constraint  54

4.2.5 Effectiveness of Procurement Auditing  54

CHAPTER FIVE  55

5 CONCLUSION AND RECOMMENDATIONS  55

5.1 Conclusion  55

5.2 Recommendations  56

5.3 Suggestion for Further Study  57

REFERENCES  i

APPENDIX  vii
LIST OF FIGURES

Figure 2-1: Conceptual Framework .................................................................24

LIST OF TABLES

Table 3-1: Number of sample units, sample ratio and sample size .......................30
Table 3-2: Summary of the Link between Research Questions and Data Sources .......34
Table 3-3: Cronbach’s Alpha value ....................................................................35
Table 4-1: Response Rate of questionnaires ........................................................37
Table 4-2: Demographic characteristic of the Respondents ....................................38
Table 4-3: Descriptive Analyses for Record Management ......................................40
Table 4-4: Descriptive Analysis for Auditors competency ......................................42
Table 4-5: Descriptive Analysis for Auditors Independence .................................44
Table 4-6: Descriptive Analyses for Resource constraint ......................................47
Table 4-7: Descriptive Analyses for Effectiveness of procurement Auditing ..........48
Table 4-8: Effective public procurement auditing Descriptive Statistics ...............49
Table 4-9: Correlation table ................................................................................50
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
<td>Auditors’ Competence</td>
</tr>
<tr>
<td>AI</td>
<td>Auditor’s Independence</td>
</tr>
<tr>
<td>AICPA</td>
<td>American Institute of Certified Public Accountants</td>
</tr>
<tr>
<td>CDF</td>
<td>Constituency Development Funds</td>
</tr>
<tr>
<td>CEPA</td>
<td>Centre for Policy Analysis</td>
</tr>
<tr>
<td>CPAR</td>
<td>Country Procurement Assessment Report</td>
</tr>
<tr>
<td>EPA</td>
<td>Effectiveness of Procurement Auditing</td>
</tr>
<tr>
<td>FAG</td>
<td>Federal Auditor General</td>
</tr>
<tr>
<td>FPPA</td>
<td>Federal Public Procurement and Property Administration Agency</td>
</tr>
<tr>
<td>GAO</td>
<td>General Accounting Office</td>
</tr>
<tr>
<td>INTOSAI</td>
<td>International Organization of Supreme Audit Institutions</td>
</tr>
<tr>
<td>MoFEC</td>
<td>Minister of Finance and Economic Cooperation</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>PPOA</td>
<td>Public Procurement Oversight Authority</td>
</tr>
<tr>
<td>RC</td>
<td>Resource Constraints</td>
</tr>
<tr>
<td>RM</td>
<td>Record Management</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Science</td>
</tr>
<tr>
<td>TISA</td>
<td>The Institute for Social Accountability</td>
</tr>
</tbody>
</table>
ABSTRACT

The purpose of this study is to examine the Factors Influencing the Effectiveness of Procurement auditing in the Public Sector: Evidence from Selected Public Sector institutions in Ethiopia. The study examined how the Record management, Auditors competency, auditor’s independence and resource constraint influence the Effectiveness of procurement auditing in public sectors. In light of this objective, the study employed mixed methods research approach. Stratified random sampling design employed based on the nature of the target population. Consequently, the study selected a sample of sixty two (62) individuals from 73 target populations and Three (3) top management for interviwe. The data analyzed on quantitative basis using inferential and descriptive statistics and qualitative data was analyzed by thematic analyses. Findings indicate that record management, auditor’s competency, auditors’ independence and resource constraint have significant impact on public procurement auditing effectiveness. From the study conclusions are made. First the model depicts that record management accounts for 44.3% of variations in public procurement auditing, second auditors competency accounts for 27.3%, third, auditors independence accounts for 28.9 % and lastly resource constraint accounts for 30.1% of variations in public procurement auditing effectiveness. Based on the findings, the study recommends PPA and other public bodies that carry out procurement auditing should protect auditor’s independence, properly allocate audit work budget and time, release budget timely, paid enough salary and benefit to auditors, maintain enough staff and sufficient resource and maintain long and short time training for audit experts public bodies that carry out procurement should maintain complete and accurate, procurement process records, manage procurement record centrally and kept procurement records in its category.

Key Words: Effectiveness of procurement auditing, Record management, Auditors competency, auditor’s independence and resource constraint, PPA
CHAPTER ONE

1  Introduction

1.1  Background of the study

Procurement Audit is a tool, which attempts to add value in proper use of resources by identifying the inadequacies in procurement of goods, works and services and suggest remedial action for immediate action and future correction. Therefore, focus of the audit exercise is to ensure that accountability exists at each and every stage of procurement and implementation of public works and projects. According to Office of the auditor general Nepal (2005) Public procurement audit is to ensure that public funds are expanded for their intended purpose and with a view to maximizing value received by the public purchaser ensuring that proper and accountable systems are in place and adhered to and identifying any weaknesses in procurement (TISA, 2009). Public procurement audit can be explained as the process of gathering and evaluating sufficient evidence on government procurement activities to ascertain whether specified laid down procedures have been complied with or not (Abdolmohammadi and Thibodeau, 2007). Public procurement audits are seen as very important to the realization of value addition to government procurement in terms of ensuring accountability, transparency, prevention of improper procurement practices, and improving upon past procurement performance (Mapesa and Kibua, 2006).

The Public Procurement and Property Administration Agency of Ethiopia (2010) notes that an effective external procurement audit is one decisive factor in better governance of public funds, and that its Audit Directorate is uniquely placed to contribute and achieve high-level goals, aligned with and supporting the Agency's vision and mission; executing ethical, economical, efficient and effective public procurement related operations; and safeguarding public funds against loss due to waste, abuse, mismanagement, errors, and fraud and other irregularities; advocating development and maintenance of reliable management of procurement information and disclosure of that information in timely reports including fulfilling accountability obligations and Ensuring that procurement activities and processes are in accordance with the Proclamation, Directive, and other documents governing public procurement.
The most obvious challenge to the procurement audit function is the fact that there is a lack of procurement capability vested in the control units and federal procurement property agency only reports to the ministry of finance and cooperative which is a clear limitation to their mandate and independence. Thus, while the Auditor Department is keen to become involved in the procurement sector, it lacks qualified staff with knowledge of procurement and the correction measurement of the finding is weak (Yirga, 2011).

Public procurement and Property Administration Agency of Ethiopia (2015/16) identified different factors affect Ethiopia government procurement audit system. These factors include: poor documentation and improper record keeping; habitual violation of public procurement laws and regulations; incompetence of procurement and audit personnel; and inadequate supply of resources for the audit function, low capacity of procurement professionals, low interaction between procurement entities and Public Procurement and property Agency (PPA), deliberate controlling of competition, non-compliance with provisions of the law, splitting of contracts into smaller lots, lack of funds and non-cooperativeness of suppliers, and corruption.

Past studies including John et al. (2012) on public procurement audit revealed that the most important factors that influencing effective was improper record keeping; incompetence of procurement and audit personnel; and inadequate supply of resources for the audit function. The objective of this study was hence to assess the impact of factors on the effectiveness of procurement audit in Ethiopia.

1.2 Statement of the problem

Procurement Audit is an evaluation process that reviews different procurement stages like planning, execution, reporting and follow up to determine the completeness, efficiency as well as the accuracy of the procurement process. Some of the problems faced are related to the following major factors: The first thing that can affect public procurement is lack of knowledge and expertise to fulfil their responsibility. Procurement auditors are expected to be skillful, competent and updated with changes in their profession and technology. Lack of the necessary knowledge can distort the overall audit work. And also, most of the activities made by auditors like:- understanding the audited entity, determining materiality, control tests, substantive
tests, sample size and risk determination and others need experience to provide reliable information to the users.

Another thing that can have an impact on public procurement audit is inadequate staff capacity and training. Auditors must rely on technical expertise, professional judgment and a good understanding of how an error or fraud is committed in order to detect miss procurement process. Inadequate staff capacity and training can therefore have severely debilitating effect on the ability of auditors to address their objectives. In particular, capacity for relatively recent or less widespread audit techniques, such as information technology auditing, is often weak due to a lack of specialized training (Yirga, 2011).

Similarly the third thing that can affect auditing is Lack of independence. Auditors should maintain an independent stance and remain impartial not only in facts but also in appearance to provide independent information. Challenges of independence may come from the audited entity or the users of the information. Auditing of governmental entities mostly focus on determining whether the auditors have discharged their stewarding responsibility and became accountable. So, if the auditor is not independent from audited entity, he/she can face difficulty for him/her to report on audited entity fault. Independence of an auditor can be hindered due to political, economic or social pressures. The Federal office of Auditor General (FOAG) carried out 50-60 financial audits in 2009 and 8-10 performance audits. The FAG report directly to the Parliament and the overall enforcement of their recommendations are considered to effective. However, there is no established program to ensure that auditors are well aware of all the requirements in public procurement specifically but they are invited to participate in the general procurement training offered by Public Procurement and Property Administration Agency (PPPA). The audit unit in PPPA is subordinated to Minister of Finance and Economic Cooperation (MoFEC) putting restrictions on its independence and mandate to enforce its recommendations (Ethiopia 2010 Country procurement assessment Report (CPAR).

Difficulty in collecting the necessary data for audit can be another factor that influences an audit. Auditors should have competent, relevant and reasonable audit evidence based on which they will judge and make conclusions regarding the organization, program, activity or function under audit. But, intentionally or due to the lack of awareness obtaining all relevant data may sometimes be challenging. Untimely preparation and
delivery of procurement reports is the other factor that affects the procurement audit in relation to data collection.

Finally lack of motivation can have its own impact on auditing. Auditors should give reasonable care in performing their work. This becomes true if they can be interested with what they are performing and interest is the result of satisfaction. Physical or mental benefits of the work can give the auditor satisfaction. Lack of benefits (salary, trainings, educational opportunities, bonuses etc) may limit the auditor’s satisfaction and make him/her to be careless in discharging his/her duties. So, with no motivation, the auditor’s output cannot be reliable. One of the main issues is the high turnover of staff in the public sector in general and accordingly in procurement related functions. The high turnover of staff is a typical problem and the root cause seem to be the low salary level compared to international organizations and even the private market. The lack of recognition of procurement as a profession and its limited options in terms of building a professional career is also considered to be part of the problem (Ethiopia 2010 Country procurement assessment Report CPAR).

Generally the performance public procurement auditing in Ethiopia practically affected by different factors such as less monthly transport allowance and salary, weak documentation, late participation of exit conference, lack of skilled man power and weak commitment to take action measurement in audit findings. (Federal Procurement and Property Audit and Follow Up Directorate 2008/2009 E.C Yearly Plan and Performance Report) and (Addis Ababa Finance Economic and Development public procurement and property Audit and follow up work process 2008/2009 E.C Yearly Plan and Performance Report). Both Addis Abeba and Federal office of public procurement are guided under same public procurement and property administration rule. Not only at both level throughout the country the function of public procurement is the same. The report also indicated that most of problems shown in public procurement at different level are relatively the same.

In view of the above, these stated problems can be ground to be considered as empirical issues and this study identified the factors affecting performance of public procurement auditing in the procurement process which determine the completeness, efficiency as well as the accuracy of the procurement process.
1.3 Objective of the Study

The general objective of this study is to identify factors affecting effectiveness of public procurement auditing in selected public sectors in Ethiopia. Based on this general objective the following specific research objectives (SO) were developed:

SO1. To assess the relationship between record management and effectiveness of procurement auditing.

SO2. To assess the relationship between auditors’ competence and the effectiveness of procurement auditing.

SO3. To examine the relationship between auditors’ independence and the effectiveness of procurement auditing.

SO4. To examine the relationship between resource constraints and effectiveness of procurement auditing.

1.4 Hypotheses of the Study

1. H0: Record management does not significantly affect the effectiveness of public procurement auditing.

2. H1: Auditors’ competence does not significantly affect the effectiveness of public procurement auditing.

3. H2: Auditors’ independence does not significantly affect the effectiveness of public procurement auditing.

4. H3: Resource constraints does not significantly affect the effectiveness of public procurement auditing.

1.5 Significance of the study

The primary use of this research is to the public entities how carry out public procurement auditing. The public entities might be able to see its level and procurement audit activities, and learn some lessons and build some corrective measures for the weaknesses based on recommendations to be forwarded. Further, the study has paramount use for different stakeholders who are interested for such as regional procurement and property agency, audit firm and business associations. Finally, the
study might have invaluable importance for future researchers who need to conduct a study in this and related fields.

1.6 Scope of the Study

The study focused on procurement audit of Ethiopia in the case of the federal government including regional governments especially Addis Ababa administration procurement, 5 sub city of Addis Ababa (i.e. Arada sub city, Bole sub city, yeka sub city, Gulalle sub city and Lideta sub city) and public procurement and property administration agency. The study has examined factor affecting of procurement audit, and focused on the availability of audit resources, management of documentation and auditors’ competency and independency in particular.

1.7 Limitation of the Study

Some of the respondents might not have been willing to reveal true information needed for the study for fear of any adverse repercussions. This was solved through explanation of the benefit of the study to the respondents and allowing the respondents to administer the questionnaires themselves. The researcher also assured the respondents that the research was only for academic purposes and all the information obtained will be treated with outmost confidentiality. The study used questionnaires for data collection, which were left with the respondents to be collected later after they were complete. The problems associated were loss of questionnaires, incomplete questionnaires and failure to give information. They were overcome by continuous follow up and by providing the questionnaires. Shortage of latest reference books and literature on the area in Ethiopian content consider as limitation for this study. The study managed this limitation by using possible references.

1.8 Organization of the study

This paper is structured in five chapters. The first chapter covered an introduction, statement of the problem, objective, specific objective, significance of the paper, scope and Limitation of the study. In the second chapter theoretical and empirical review and journals related to this project reviewed and the third chapter is research methodology. Chapter four show and discuss all the results in detail. Chapter five draws conclusions from the results discussed in chapter four and tried to set recommendations.
CHAPTER TWO

2 LITERATURE REVIEW

Introduction

This chapter highlights the literature on public procurement auditing and factors affecting it. The chapter is organized in three sections. First theoretical reviews are presented in section 2.1; this is followed by empirical reviews in section 2.2 and conclusions and knowledge gaps in section 2.3.

2.1 Theoretical review

According to Thai (2009) Public procurement is continuing to evolve both conceptually and organizationally. That evolution accelerated during the 1990s as governments at all levels came under increasing pressures to ‘do more with less’ all governmental entities of rich and poor countries are struggling in the face of unrelenting budget constraints; government downsizing; public demand for increased transparency in public procurement; and greater concerns about efficiency, fairness and equity. In addition policy makers have increasingly used public procurement as a tool to achieve socioeconomic goals.

According to Dobler and Burt (1998) procurement can be defined as process of obtaining works, goods consultancy and other services through the acquisition, whether under formal contract or otherwise, of goods, services and works from third parties by contracting authorities. In addition, Adotévi (2009) defined procurement as: a business management function and it is an activity of assessing, buying and receiving goods, works and services.

It is public whenever this process is performed by public organizations or whenever it is performed on their behalf or again funded by public organizations. The process of procuring starts with the definition of what is to be procured (goods, services and/or works, quality), then is followed by how it should be etc), then proceeds to perform the act of procuring that is finalized by a contract or an order, followed by a delivery and the subsequent payments to the supplier. Performance is defined by how “well” this process is conducted and how “good” the outcome is. The act of performing, carrying into execution or action, execution, achievement, accomplishment, representation by action (www.yourdictionary.com, 2018).
The spread of performance management has plainly had effects on how organizations work. Measurement is more common, and it has defined standards of performance in new ways. Yet the standards also have elements of ritual, in that meeting a set target becomes important even though other things may be neglected. Meeting the target may entail producing appropriate data rather than any substantive performance. How far performance measurement is imposed on people depends on a wide range of contingencies (www.oxfordscholarship.com, 2018).

2.1.1 Public & private sector procurement

The main difference between Public & private sector procurement being the recognized value and strategic benefits that procurement can bring to the organization; in private, it is seen as integral to the organization, however in public its merely routine /operational / transactional almost a means to an end. Private sector is more flexible and open to innovations; they are profit and people driven. Public sector is highly regulated and sometime can be seen as inflexible. Procurement in the public sector (local government) is mechanically driven to meet procedures/regulations and often interfered with politically. Risk of challenge is not seen as a serious concern. Because of the Public Contracts Regulations most of the public sector is too risk averse to procure effectively. One significant difference is that the public sector seems frightened to talk to suppliers, relying too much on the use of formal processes & arms length negotiations. Public sector procurement is too rules based (for very understandable reasons) to allow for much innovative procurement and to take advantage of shifts in the market (Claire, 2013). In addition the main difference between public and private sector procurement is the public sector is constrained by regulations, the public sector has more complex motivations and objectives, the public-sector stakeholder base is wider and includes those outside the buying organization and the public sector faces more transparency Thai (2009)

Ignorance of the method and process of performing a given function has the danger of sub-optimal achievement; inefficiency; and in some cases a complete destruction of a system. Public procurement constitutes a significant proportion of gross national product and overall public expenditure in all countries. It is central to the efficient delivery of public services as well as public infrastructure and is a sine qua non for good governance. Progressive privatization, rapid technological developments, outsourcing of public service delivery and the increased focus on results-based-
management in the public sector have all contributed to the increased eminence and sophistication of the public procurement function. In the case of developing countries the introduction of new development delivery modalities like Sector Wide Approaches and related budget support funding are conditioned by the ability of the recipient governments to put in place efficient and integrated procurement and financial management systems that fulfill national accountability requirements as well as those of International Financial Institutions and the donor community. In response to the aforementioned developments, the International Training Centre of the International Labor Organization developed this course in order to enhance the capacity of national and International Financial Institutions procurement audit and supervision staff in assessing procurement operations for regularity e.g. compliance with the law/regulations and in verifying achievement of value for money which is defined as the optimum combination of whole life cycle cost and quality (fitness for the purpose) in meeting the user's requirements (www.itcilo.org, 2018)

In the case of public procurement audit, the use of poor auditing process has the risk of keeping weak and corrupt procurement practices in place because the audit exercise could not discover and report them. Other risks to public procurement due to poor audit practices include: waste of public resources; lack of fair and transparent procurement process; lack of accountability; and failure to comply with procurement rules and procedures and also these have the ultimate effect of adversely affecting the national development efforts (Daniel, 2014).

The auditing function has the primary objective of providing reasonable assurance that a set of specified and established criteria have been complied with; and it involves the collection and evaluation of sufficient evidence to determine whether an assertion corresponds with established criteria (Abdolmohammadi and Thibodeau, 2007). The two main forms of audits often referred to are: internal and external audits. The main difference between these two borders on the extent of details; whilst internal audit generally is concerned about the whole operations of an institution with respect to certain five key internal control objectives and not just the financial aspects, external audits mainly focuses on financial control systems that have direct, significant effect on the financial performance of the institution.
The public procurement is also a key instrument through which governments can influence directly or indirectly all aspects of public and economic life and through which they can pursue strategic national objectives, including economic development. Due to its market significance, public procurement has also gained a global importance, leading to transnational agreements and common regulation trends. Although public procurement systems may differ significantly from country to country, there are nowadays a number of common characteristics and applicable common principles. These are primarily open competition, non-discrimination, transparency, fairness and efficiency.

In some economic integration spaces, there are even supranational regulations for public procurement. This is the case for the European Union countries, where such provisions are determined by the European Directives on Public Procurement (Abdolmohammadi and Thibodeau, 2007).

Drawing from the definitions Abdolmohammadi and Thibodeau (2007), public procurement audit can be explained as the process of gathering and evaluating sufficient evidence on government procurement activities to ascertain whether specified laid down procedures have been complied with or not. Public procurement audits are seen as very important to the realization of value addition to government procurement in terms of ensuring accountability, transparency, prevention of improper procurement practices, and improving upon past procurement performance (Mapesa and Kibua, 2006).

Effective Public procurement auditing proactively ensure efficiency, accountability, and transparency in public sector procurement process. Public procurement auditing in Ghana, ensure efficiency, accountability, and transparency in public sector procurement process and also it reduce the corruption in public procurement (Daniel, 2014).

### 2.1.2 Determinant of public procurement audit

A well-functioning and effective public procurement system is a pre-requisite for efficient government procurement; the achievement of value for money; the elimination of fraud and corrupt practices; promotion of competition, transparency and accountability, thereby ultimately promoting national development (Tutu et al., 2012). To ensure that public procurement performs as expected one cannot overlook the essence of an effective audit system. Public procurement entities must adhere to all
relevant rules and regulations governing procurement activities in order to be able to achieve enhanced productivity, efficiency, effective utilization of resources and a healthy government budget (Nketia, 2012). It has been realized that public procurement audits have not been able achieve their raison due to a number of bottle necks.

Developing countries in general are confronted with challenges of poor record keeping and management; sub-standard professional and institutional capacity; absence of state institutions and lack of political will to review procurement related issues and sanction offenders appropriately; legislative bottlenecks; and resource constraints of public auditing institutions Organization for Economic Cooperation and Development (OECD) and Aglomasa, 2008). Challenges and weaknesses specific to Africa include; resource constraints, poor record keeping, lack of staff competence and expertise, inadequate training of procurement staff, absence of procurement units in some public institutions; cumbersome processes, small procurement thresholds, and failure on the part of some internal audit units to perform their functions effectively (Aglomasa, 2008; Aikins, 2012). In the subsequent sections different theoretical factors affecting procurement audit are presented.

2.1.3 Record Management

Megill (2005); William (2004) and Elizabeth and Geoffrey (2003) Defines record management as the professional practice of managing the records of an organization throughout their life cycle from the time they are created to their eventual disposal. It includes identifying, classifying, storing, securing, retrieving, tracking and permanently preserving records. Record management is primarily concerned with the managing the evidence of organization’s activities as well as reduction or mitigation of risk associated with it. Just as the records of the organization come in a variety of formats, the storage of records can vary throughout the organization. File maintenance may be carried out by the owner, designee, a records repository, or clerk. Records may be managed in a centralized location, such as a records centre or repository, or the control of records may be decentralized across various departments and locations within the entity. Records may be formally and discretely identified by coding and housed in folders specifically designed for optimum protection and storage capacity, or they may be casually identified and filed with no apparent indexing. Organizations that manage records casually find it difficult to access and retrieve information when needed. (Kombo and Tromp, 2011) stated that good governance cannot be achieved an
environment in which records are poorly managed, and in situations in which records are regularly missing or lost. When the records are, disorganized, some of these records are, will be missed or lost; this is likely to lead to poor decisions, and sometimes, delayed decisions. In other words, citizens will be denied quality decisions. Furthermore, in an environment in which records are, poorly kept proper audit is practically impossible. These are very costly failures, especially for developing countries and tendering processes are not an exception to this problem. During the course of an audit, original paper records owned by the area under review are sometimes needed as evidence to support findings. Ideally, copies should be made but on the rare occasion when original evidence is required, a copy of the record or a marker should be placed in the organization’s file and the original returned as soon as possible. In order to maintain audit trails the original records may have to remain within the internal audit records system until the audit is completed (e.g. when all actions have been agreed and completed by management). (Nketia, 2012).

Audit work is conducted in an orderly, efficient and accountable manner; audit findings, conclusions and recommendations are fully documented and supported; continuity is provided in the event of a disaster; legislative and regulatory requirements are met; records are relevant, reliable, authentic, complete and usable; records are retained only for as long as they are needed and disposed of in accordance with the organization’s information disposal rules, relevant regulations and legislation; there is an “audit trail” which enables any record entry to be traced to a named individual at a given date/time with the secure knowledge that all alterations can be traced and deletions identified; new staff can see what has been done, or not done, and why and any decisions made can be justified or recognized at a later date (Megill, 2005).

According to Public Procurement Oversight Authority (PPOA), (2008), an organization’s ability to function effectively and give account of its actions will be undermined if sound records management principles are not applied. Procurement records play a significant role as evidence of purchases of goods and services. Unorganized or otherwise poorly managed records mean that an organization does not have ready access to authoritative information, to support sound decision making or delivery of programs and services. This factor contributes to difficulties in retrieval and use of procurement records efficiently and therefore inability to carry out the audit process. Sound records management is a critical component for good governance,
effective and efficient administration, transparency, accountability and delivery of quality services to the citizens. Good record keeping practices contribute to the following:- creation and maintenance of accurate and reliable information; easy accessibility to information and Transparency and accountability. Procurement units and procuring entities performing their functions efficiently, availability of authentic, reliable and tangible records to fight corruption and resources being matched to objectives.

Records form the foundation of good and accountable administration. Unorganized and poorly managed records lead to inability to access information needed to support policy formulation, implementation and delivery of programs and services. Procurement records provide the controls that document how a procurement action was undertaken, and protects essential audit trails. Disorganized records mean reviewers and auditors take an excessive amount of time to locate needed records. A well-managed procurement records management system will enable the physical and logical control of records and prevent unauthorized access, tampering, loss, misplacement or destruction of documents. Proper records management is essential for ensuring transparency and probity in the procurement and financial management (Elizabeth and Geoffrey, 2003).

Records are important for accountability and are a powerful deterrent against procurement and financial malpractices. Weak records management practices mean officials cannot be held accountable for their actions (PPOA, 2008).

Record management is primarily concerned with the managing the evidence of organization’s activities as well as reduction or mitigation of risk associated with it. Just as the records of the organization come in a variety of formats, the storage of records can vary throughout the organization. File maintenance may be carried out by the owner, designee, a records repository, or clerk. Records may be managed in a centralized location, such as a records centre or repository, or the control of records may be decentralized across various departments and locations within the entity (Elizabeth and Geoffrey, 2003).

2.1.4 Auditors’ Competency

The main purpose of the audit is to assure outsiders that the financial statements are free from material misstatements, the value of an audit depends on the outsiders ex ante perception of; the probability that the auditor will discover the breaches or errors in the
reporting system and on the probability that the auditor will report the discovered breaches or errors (DeAngelo, 1981). This factor is very important to develop the auditor and to achieve a high level of quality for public sectors, during: development of leadership and management skills and proficiencies; the development of an overall workforce plan; policies relating to handing over of tasks; creation of staff knowledge and skills; equal treatment and fair opportunity to all staff.

Competency is defined as a capability, ability or an underlying characteristic of an individual, which is casually related to effective or superior performance (Armstrong and Baron, 1995). Competencies are divided into two categories; technical and behavioural competency. Public procurement audit professionals have to strive to achieve three competing demands of meeting commercial interests with key themes of value for money, economy, efficiency and effectiveness; the regulatory interests with key themes of competition, transparency, equality and compliance and the social interests whose key themes include public interest, employment concerns, social exclusion, economic development and environment policy. In an effort to attain these demands, organizations constantly look for employees who have skills necessary to deal with the wide variety of tasks faced by procurement auditing professionals.

Many researches find that there is a positive association between audit quality and the auditor skills and proficiency. Also, technical capability seems to increase the auditor’s remuneration: the level of education, the working experience and the certification type of the auditor are found to be positively associated with hourly fee rates. Hence, the results suggesting that both size and technical capability have a positive impact on auditor remuneration (Sundgren, 1998).

Where organization have organized their performance auditing separately from financial auditing, it is quite acceptable that personnel selected for performance auditing have different backgrounds and skills than those selected for financial auditing. A key factor in the development process is learning through practical auditing work International Organization of Supreme Audit Institutions (INTOSAI), (2001). Managerial training recognizes that demonstrated skill at auditing does not necessarily equip one to manage an internal system administration or supervise an audit team.

The required new skills, such as operational and strategic planning, budgeting for time and money, etc. grow more extensive as one moves to increasingly senior positions.
within the organization. Continuing education ensures that auditors routinely undergo training to continuously maintain and enhance their professional capabilities. A commitment to life-long learning should be encouraged (Wee, 2002). On the other hand, continuous education and training may include such topics as current developments in performance audit methodology, management or supervision, qualitative investigation methods, case study analysis, statistical sampling, quantitative data-gathering techniques, evaluation design, data analysis, and reader based writing. It may also include subjects related to auditors’ fieldwork, such as public administration, public policy and structure, government administration policy, economics, social sciences, or Information Technology science. Moreover, disciplinary actions such as warnings or cancellations of authorization are, of course, not possible against non-certified auditors.

This means that the prevailing legislation, rather than the set of auditing standards adopted by the profession, sets the lower bound of audit quality for the non-certified auditors. As a consequence, it may be that the minimum audit quality differs between certified and non-certified auditors. There is also some evidence supporting that view. For example, Sundering, (1998) found that noncertified auditors are less likely to modify the audit report, which suggests that non-certified auditors provide lower assurance than certified auditors.

Simunic and Stein, (1987) suggested that although auditor moral hazard has received sortie attention in the academic literature, it is perceived to be particularly acute in the government environment. In this environment, the chances of client financial failure and consequent ex post revelation of lower-than-implied audit quality are minimal.

Thus, there is a need for alternative mechanisms for enhancing the credibility of the audit. Both the General Accounting Office (GAO) (1987) and the American Institute of Certified Public Accountants (AICPA), (1987) view appropriate audit procurement practices as a mechanism for ensuring that the contracted audit quality is in fact delivered. The GAO and the AICPA (2003) suggested that appropriate procurement practices can independently contribute to the selection of a competent auditor in a market in which it is difficult to directly assess whether an auditor possesses the specialized knowledge necessary to provide a high quality government audit.
The main purpose of the audit is to assure outsiders that the financial statements are free from material misstatements, the value of an audit depends on the outsiders ex-ante perception of; the probability that the auditor will discover the breaches or errors in the reporting system and on the probability that the auditor will report the discovered breaches or errors (DeAngelo, 1981). This factor is very important to develop the auditor and to achieve a high level of quality for public sectors, during: development of leadership and management skills and proficiencies; the development of an overall workforce plan; policies relating to handing over of tasks; creation of staff knowledge and skills; equal treatment and fair opportunity to all staff.

2.1.5 Auditor's Independence

An independent audit committee enhances the independence of external auditor, and ensures that auditor is free from management influence. The committee can conduct informal and private meetings without the presence of the company’s management to encourage the external auditor to be transparent on material issues at an early stage. The best known definition of independency in academic literature is De Angelo, (1981). Others include: an attitude/state of mind Schuetze, (1994); a function of character with the integrity and trustworthiness being key Magill and Previts, (1991).

Auditors should Ethical show honesty, integrity, probity, diligence, fairness, trust and respect while performing their duties. Ethical behaviour includes avoiding conflicts of interest, and not making improper use of an individual’s position (Wee, 2002). Ethical behaviour supports openness and accountability in procurement with the result that suppliers have confidence in participating in the Government marketplace. It also reduces the cost of managing risks and enhances trust in public administration. Ethical behaviour is important in public procurement as it involves the expenditure of public money, and is subject to public scrutiny. Public officials should always behave ethically and fairly in their business undertakings. Ethical behaviour supports openness and accountability in a procurement process and gives suppliers confidence to participate in the Government marketplace. Ethical behaviour can also reduce the cost of managing risks associated with fraud, theft, corruption, and other improper behaviour; and enhance confidence in public administration (Karanja and Mugo, 2010).

A procurement audit process that conforms to the expected standards of integrity, uprightness and honesty is one in which clear procedures are consistent with
Government policies and legislation are established, understood and followed from the outset. These procedures need to consider the legitimate interests of public and ensure that all suppliers are treated equitably (Wee 2002). An important and effective way to maintain ethics awareness in agencies is to provide training for employees.

Ethics training and seminars can be provided, along with training in more specific areas, such as procurement procedures, record keeping, records management, and accountability and administrative law. Regular reviews or audits of procurement processes can be done to ensure probity is being considered and achieved (Amos and Weathington, 2008). Ponemon and Gabhart, (1990) used Kohlberg stage model of moral development and ethical cognition to examine an auditor's implicit reasoning in the resolution of an independence conflict. This well-validated model distinguishes three levels of ethical cognition: Pre-conventional, Conventional, and Post-conventional. They found that a systematic relationship exists between auditors measured ethical cognition and their resolution of an independence conflict in a hypothetical situation. They also found that independence judgments are significantly influenced by penalty related factors and are less sensitive to affiliation factors (i.e., living up to expectations).

Craswell (1995); Krishnan, (2003). This implies that auditors with higher audit quality (i.e., auditors independent) are more likely to resist client management pressures than auditors with lower audit quality.

Wright and Wright, (1997) argued that auditor independence is at the heart of the integrity of the audit process. When auditors and clients negotiate issues about financial reporting, maintaining the integrity of the independent audit function is mandatory for auditors and required by the standards of the accounting profession.

Recently, financial scandals at companies such as Enron and WorldCom have eroded public confidence in the independence of the accounting profession and the quality of audit services.

The scope of the independent audit should encompass not only the fair presentation of the basic financial statements, but also the fair presentation of the financial statements of securing independent audits should make their decision concerning the appropriate scope of individual funds and component units. The cost of extending full audit coverage to the financial statements of individual funds and component units can be
justified by the additional degree of assurance provided. Nevertheless, the selection of the appropriate scope of the independent audit ultimately remains a matter of professional judgment. Accordingly, those responsible for the audit engagement based upon their particular government’s specific needs and circumstances, consistent with applicable legal requirements (Magill and Previts 1991).

Governmental entities should undertake a full-scale competitive process for the selection of independent auditors at the end of the term of each audit contract, consistent with applicable legal requirements. Ideally, auditor independence would be enhanced by a policy requiring that the independent auditor be replaced at the end of the audit contract, as is often the case in the private sector. Unfortunately, the frequent lack of competition among audit firms fully qualified to perform public-sector audits could make a policy of mandatory auditor rotation counterproductive. In such cases, it is recommended that a governmental entity actively seek the participation of all qualified firms, including the current auditors, assuming that the past performance of the current auditors has proven satisfactory (Francis, 2004). Except in cases where a multiyear agreement has taken the form of a series of single-year contracts, a contractual provision for the automatic renewal of the audit contract (e.g., an automatic second term for the auditor upon satisfactory performance) is inconsistent with this recommendation. Professional standards allow independent auditors to perform certain types of non-audit services for their audit clients. Any significant non audit services should always be approved in advance by a governmental entity’s audit committee. Furthermore, governmental entities should routinely explore the possibility of alternative service providers before making a decision to engage their independent auditors to perform significant non-audit services. Abbott, (2001) states that audit procurement process should be structured so that the principal factor in the selection of an independent auditor is the auditor’s ability to perform a quality audit. In no case should price be allowed to serve as the sole criterion for the selection of an independent auditor.

2.1.6 Resource Constraints

The major resource constraints enumerated are: inadequate funding and late release of funds; lack of requisite staff; inadequate office supplies; insufficient office accommodation and; short supply of office vehicles. In spite of higher audit fee, some clients are more interested in using large audit firms. Clients are confident that large
audit firms have greater monitoring and bonding in order to capture higher audit quality (Hay & Davis, 2004). In terms of the auditor competence and specialization, including technical information and continuing education, large audit firms hire better professionals in comparison to small size firms. So, the larger the audit organization the higher auditor’s specialization (and audit quality) is expected and therefore higher audit fees is achieved (DeAngelo, 1981). For instance, as the demand for higher audit quality as well as additional activities is increased, higher audit fee is expected for company (Houghton & Jubb, 1999). On the other hand, the reputation of audit organizations can be negatively influenced by high-risk clients, and so, because of such influences, undoubtedly higher audit fee is charged by larger audit firms (Hogan, 1997). However, no relationship may be identified in cases of doubts regarding going concern between audit fees and “going concern opinion” (DeFond et al., 2002), and the “demanding for audit quality” (Lindberg, 2001). Maintaining the reputation, auditors wish to perform an acceptable audit work. In summary, higher audit fee may result in greater audit quality (Eshleman & Guo, 2014) through increasing audit efforts as well. According to John et al. (2012) and inadequate supply of resources for the audit function.

2.2 Empirical Review

There have been several studies which have been conducted on challenges affecting effectiveness of auditing in Africa and other parts of the world.

Karugo, (2015) conducted a study on Factors Affecting Effective Procurement Auditing of Constituency Development Fund (CDF) Projects in Kenya. The study used descriptive research design and quantitative and qualitative data analysis. The study concludes that legal framework, professional skills, record management and auditor’s independence affect audit procedures of CDF projects in Kenya. The researcher recommended that the government should employ professional auditors to undertake public procurement audit and facilitate their continuous training to ensure they are well equipped with necessary technical skills.

John et al. (2012) conducted a study on the factors that affect effectiveness of public procurement audits for constituency development funds in Kenya. The study used descriptive research design and both quantitative and qualitative methods of data analysis. The study pointed out the most important factor was found to be technical audit factors followed by regulatory framework, client related factors and auditor’s
professional qualities respectively. Maxwell, (2014) conducted a study on Public procurement audit process in practice a case study of the public procurement authority office in Kumasi and the procurement unit of the Kumasi polytechnic in Ghana. The study used exploratory research design and pointed out that the most important factor was poor documentation and improper record keeping; incompetence of procurement and audit personnel; and inadequate supply of resources for the audit function.

As a result, the researcher recommended that the processes involved in procurement audits as identified in this study appear to be rather reactive instead of being pre-emptive and preventive.

Windsor and Ashkanasy (1995) extended Ponemon and Gabharts, (1990) study by including economic and personal belief variables, the moral atmosphere of the audit firm, is also being explored by researchers, although no clear results have yet emerged. Ashkanasy and Windsor, (1997). Raghunandan, (2002) suggested that auditors with longer tenure are more likely to be independent, and are consistent with Myers (2003) in that longer auditor tenure is associated with higher quality of reported earnings.

Mohamed, (2017) conducted a study on Factors Affecting the Independence of the External Auditor within the Auditing Profession in Turkey. The study used descriptive research design and quantitative and qualitative data analysis. The findings of the study showed that the most important of that the auditing standards and professional behaviour are the most impact factor on the independence of the auditor and that the integrity, honesty and truthfulness of the qualities that must be provided by the independent auditor. The study concluded with a set of recommendations on most important that there is a need to adopt all policies and procedures that lead to preserve the independence of the auditor, especially creating the environmental circumstances leading to the achievement of the required independence and participating in achieving the required quality for the auditing profession.

Zulkifli (2014) investigated the factors that contribute to the effectiveness of audit in the Malaysian public sector. The study intended to determine the auditors” perception toward the effectiveness of audit work, influenced by the quality of audit work in order to perform in an effective manner as control instrument in public financial management. It also aimed to determine the relationship between factors that contribute to the effectiveness of Audit works in promoting better transparency and integrity of
public management. The scope of this study covered the internal auditors that work in the ministries in Putrajaya. In addition employed a cross sectional survey to investigate the effectiveness of internal audit. Several statistical techniques such as the descriptive statistic, correlation and regression analysis were used to analyze the data from the survey. The result of the study showed that there were significant positive relationships among the factors analyzed in this study such as auditor competency, auditors’ independence and objectivity and management support to the effectiveness of internal audit. Thus, the effectiveness of internal audit will depend strongly to the attributes of the factors analyzed in this study. Moreover, Peursem (2004) conducted a survey of New Zealand auditors to identify functions that auditors perceive to be essential to their role. The survey also sought to understand the nature of the auditor’s “role dilemma” which arises from the expectation that internal auditors will both assist management and independently evaluate management. Comments received from respondents indicated that audit’s role has changed in recent years to one of consultant rather than of “policeman”. Most of those who commented on this change did not perceive it as a problem.

Van Peursem (2005) followed up her survey with a multiple case study involving six senior auditors. The study was designed to explain how these internal auditors deal with the conflict between their audit oversight responsibilities and the provision of support to management. Van Peursem found that the tension involved in maintaining this dual role leads to role ambiguity but that this ambiguity is not necessarily undesirable. Three concepts emerged from the interviews which impact on internal auditors’ ability to maintain their independence: the position in which they establish their own role and duties, the role of professional status, and the nature of the communications in which they engage. Also, Ahlawat and Lowe (2004) examined whether internal auditors can remain objective when consulting to management in a corporate acquisition setting. The study involved internal auditors acting for the buyer or seller in an acquisition. The role that the company was taking in the negotiation process was found to influence participants’ judgments, with internal auditors allocated to the buyer condition providing significantly higher likelihood judgments about inventory obsolescence compared to those allocated to the seller condition. The researchers concluded that this suggests that internal auditors who act as consultants may not be able to maintain their objectivity.
Furthermore, Aderajew (2007) examined the factors impacting the effectiveness of internal audit services employed in a large public sector higher education institution in Ethiopia to identify factors influencing internal audit effectiveness, using a model developed for the analysis. The model consisted of four interrelated factors: internal audit quality; management support; the organizational setting; and attributes of the Audits. The findings of the study reveal that the internal audit office of the organization studied needs to enhance the technical proficiency of the internal audit staff and minimize staff turnover so as to foster audit effectiveness. The organizational status and internal organization of the internal audit office are fairly rated, but internal audit's lack of authority on budgets reduces its control of resource acquisition and utilization. The scope of internal audit services is limited to regular activities. Extending the scope of services by widening the range of systems and activities audited, with appropriate risk analysis, would improve audit effectiveness. The internal auditors, under the impression that their reports are not sufficiently utilized by the management, may not be encouraged to exert the maximum possible effort in their engagements. In addition, the lack of attention by management may send a wrong signal about the importance of internal audit services to the Audit, which in turn adversely affects the audit attributes. The study has shown that internal audit of the organization studied needs improvement in the areas of audit planning, documentation of audit work, audit Communications and follow-up of recommendations. Audit effectiveness could be enhanced by ensuring consistency in documenting audit work to enable improved review of audit work; proper follow-up of the status of audit findings and recommendations; increased distribution of audit reports; and further improvement in the quality of reporting.

2.3 Conceptual Framework

Efficient and effective implementation of public procurement audit in both developing and developed countries depend on various factors such as Resource Constraints, auditor's Capacity (competency), record of procurement process and intervention of higher level managers on reporting of audit findings.

These factors if well management will result to efficient, effective and harmonized procurement auditing which eventually result into the intended purpose.
The independent variables in this study are record management, auditor’s independence, Resource Constraints, and auditor’s competency. Effectiveness of procurement audit is presented in dependent variable. The relationship between independent and dependent factors can be exemplified as in the following figure.

**Figure 2-1: Conceptual Framework**

Source: this model is adapted and modified from Karugo and Mussa, (2015).

### 2.4 Research Gaps and Conclusion

There is a vast body of literature relating to effective audit and its measurement. Despite the extent of that literature, no single generally accepted definition or generally accepted measure of audit effectiveness has emerged. Much of the audit quality literature derives from DeAngelo’s (1981) definition. He defines audit quality as “the joint probability that an auditor will both discover and report a breach in the client’s accounting system. The discovery of a misstatement measures quality in terms of auditor’s knowledge and ability, while reporting the misstatement depends on the auditor’s incentives to disclose” DeAngelo, (1981). A number of literatures have been discussed above regarding factors affecting effectiveness of auditing. Except John et al., (2012) and Karugo, (2015) none of the above mentioned study have carried in procurement auditing. John et al., (2012) conducted a study on Factors Affecting Effective Procurement Auditing Of CDF Projects in Kenya. Specifically it sought to investigate the effect of the legal framework, auditor’s specific professional qualities, technical audit factors and client-related factors on effectiveness of public procurement audits and Karugo, (2015) conducted a study on Factors Affecting Effective...
Procurement Auditing of Constituency Development Fund (CDF) Projects in Kenya. Therefore the study was aimed at finding out factors affecting effectiveness of auditing procedures on CDF projects. Specifically it investigated the effects of the legal framework, auditor’s specific professional skills, record management and auditor’s independence on effectiveness of public procurement audits. However, both John et al., (2012) and Karugo, (2015) used a descriptive research design. Moreover, there are few studies which have been conducted within the Ethiopian context especially in procurement auditing in assessing the factors that affecting the effectiveness of auditing. Even though the studies have been conducted in other countries that have different demographic, economic, political and environmental factors from Ethiopia and hence their findings cannot be generalized to the Ethiopian case. Thus, this study tried to evaluate factors that influencing the effectiveness of auditing in public procurement process such as Record Management, Auditors’ Competence, Auditor’s Independence and Resource Constraints using infertile statistics to examine how these factors affecting the effectiveness of auditing in procurement process.
CHAPTER THREE

3 Research Methodology

This chapter described the research methodology adopted throughout this study to meet the research objectives and to address the research questions. It describes: the choice of particular research designs, research approach, sample and sampling techniques, source of data collection, data collection instruments and the method of data analysis.

3.1 Research objectives

The general objective of this study is to examine factors affecting effectiveness of public procurement auditing in selected public sector institutions in Ethiopia. Based on this general objective the specific research objectives to show the effect of resource constraints on effectiveness of procurement auditing, to find out how auditors’ competence affect the effectiveness of procurement auditing, to evaluate how record management affect the effectiveness of procurement auditing and to examine how auditor’s independence affect the effectiveness of procurement auditing.

3.2 Research Approaches

There are three alternative research approaches: qualitative, quantitative and mixed approaches. These approaches are different in terms of their philosophical assumptions as well as techniques used in data collection, analysis and interpretation, and are discussed in the subsequent paragraphs. Qualitative research approach explores attitudes, behaviors and experiences through methods such as in-depth interview and/or focus group discussion (Dawson, 2002 and Creswell, 2007). The researcher collects open-ended emerging data with the primary intent of developing themes from the data (Creswell, 2007). Qualitative approach attempts to get an in-depth opinion from participants. Apart from this, it facilitates responses, and provides data in-depth with leading respondents (Dawson, 2002). It is capable to generate a theory by addressing issues which cannot be quantified. It also explores issues which are not studied in the past properly (Creswell, 2007). However, this approach has been criticized for lack of scientific rigor, small samples, subjective and nonreplicable efforts. The researcher’s interference in the research process is very high that results bias due to small sample size and uniqueness of the research setting. It is also very difficult to make generalization to the whole population.
The second approach, quantitative research, generates statistical data through the use of large scale survey research or experiment, using methods such as close-ended questionnaires and/or structured interviews (Dawson 2002). It is a means for testing objective theories through examining the relationship among variables. It is advantageous as it, procedurally, follow scientific approach, tests reliability and validity of the instrument. It minimizes bias from the researcher’s influence and employs large sample size. Hence, the results can be believed on and the results can be generalized to larger population. However, it is not capable to address issues which cannot be quantified. So that, it may has limited scope. Finally, mixed methods approach is the blend of both qualitative and quantitative approaches. It employs strategies of inquiry that involves collecting data either simultaneously or sequentially to best understand the research problem. Mixed approach includes the use of theory deductively in theory testing and verification, or inductively in an emerging theory or pattern (Mertens 2003 cited in Creswell, 2009). Therefore, the combination provides an expanded understanding of the research problems. It utilizes the strengths and overcomes the weaknesses of the two continuum approaches. However, incorporating both designs requires a great level of effort from the researcher such as need for extensive data collection. Mixed approach characterized by its time-intensive nature of analyzing both numeric and text data. To sum up, in order to achieve the research questions stated in the previous section, the researcher used both qualitative and quantitative approach (mixed approach) in collecting and analyzing data as discussed in the following section. The selection of one over the other approach for the conduct of the study is based on the research problem (issue or concern that needs to be addressed), the researcher’s own personal experience and the will and support of the audiences (Creswell, 2009).

3.3 Research approaches adopted

Research methods are the techniques used to collect data. In this study, the researcher adopted mixed methods approach. There are different tools available to the researcher to collect the required data including questionnaires, observation, interview, and document analysis. For this study, the researcher applied quantitative (survey) and qualitative (in-depth questionnaires and interview), and are discussed in the following sub-sections:-
3.3.1 Quantitative aspect: survey

As Weisberg et al. (1996) cited in Cohen et al. (2000) stated, surveys are useful to gather factual information and data on attitudes, preferences, beliefs, predictions, behavior and experiences.

The strengths of survey research include; highly flexible, possibly cover a wide range of research questions, describe an existing situation, easy to guarantee respondents’ anonymity (for instance, questionnaires may lead to more candid answers), easier to generalize findings, and efficient in gathering large amounts of data at reasonably low cost and effort. (Muijs 2004). This project has an objective of describing the factor affecting procurement audit such as Record management, auditor’s independence, auditor competency and resources constraints. Thus, survey method of quantitative approach is appropriate and employed for this study.

3.3.1.1 Population and Sampling design

The data was obtained from randomly selected 5 Addis Ababa sub cities, federal procurement and property Administration Agency and Addis Ababa city administration targeted population. For this study 18 procurement auditors from federal procurement and property Agency, 9 procurement auditors’ from Addis Ababa administration procurement auditors and property work process, 9 procurement auditors from Arada sub city, 10 procurement auditors from Bole sub city, 8 procurement auditors from yeka sub city, 9 procurement auditors from Gulalle sub city and 10 procurement auditors from Lideta sub city are randomly selected. In addition to that 3 top level management from Federal procurement and property administration Agency are purposely included in the sample frame. Totally the target population for this study is 73.

For this study stratified random sampling techniques were employed in this study to come up with valid outcomes. The stratification criterion used selecting stratified sampling techniques are that the study decides whom to include as a respondent for the questions that would be prepared to collect data and get a better chance to select right respondents from audit experts in selected public sector institution. There is also a statistical advantage in the method, as a stratified random sample nearly always results in a smaller variance for the estimated mean or other population parameters (Columbia
The study also used purposive sampling technique for in-depth interview top level management. The basic reason here is that selected individuals are those who are responsible for the issue under investigation and have adequate knowledge.

Determining sample size varies for various types of research designs and there are several approaches in practice. As general rule, one can say that the sample must be of an optimum size that mean, it should neither excessively large nor too small (Kothari, 2004). The researcher has taken (Zikmund and Babin, 2010) sampling technique by determining the sample proportion success and not success. Glenn (1992) stated that assume there is a large population but we do not know the variability in the proportion that will adopt the practice; therefore, assume p= .5 (maximum variability) and sample size determined at 95% confidence level. Having this, the sample size will be determined with the help of the following formula of (Kothari, 2004).

\[
n = \frac{\frac{z^2 \cdot p \cdot q \cdot N}{e^2 (N - 1) + z^2 \cdot p \cdot q}}{1.96^2 \cdot 0.5 \cdot 0.5 \cdot 73}
\]

Where,
\( p = \) proportion of success = 75\%
\( q = \) proportion of fail = 25\%
\( z = \) confidence level = 1.96
\( e = \) standard error = 5\%
\( N = \) Total population = 73
\( n = \) sample size,

Therefore the sample size will be: 
\[
n = \frac{1.96^2(0.5)(0.5)\cdot 73}{0.05^2(73-1)+1.96^2(0.5)(0.5)}
\]

\[n = 62\] respondents
Table 3-1: Number of sample units, sample ratio and sample size

<table>
<thead>
<tr>
<th>Item no</th>
<th>Strata to be sampled</th>
<th>Population size</th>
<th>Proportional sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bole sub city</td>
<td>10</td>
<td>10*62/73 =8</td>
</tr>
<tr>
<td>2</td>
<td>Yeka sub city</td>
<td>8</td>
<td>8*62/73 =7</td>
</tr>
<tr>
<td>3</td>
<td>Arada sub city</td>
<td>9</td>
<td>9*62/73 =8</td>
</tr>
<tr>
<td>4</td>
<td>Gulalle sub city</td>
<td>9</td>
<td>9*62/73 =8</td>
</tr>
<tr>
<td>5</td>
<td>Lideta sub city</td>
<td>10</td>
<td>10*62/73 =8</td>
</tr>
<tr>
<td>6</td>
<td>Addis Ababa admin Procurement and property work process</td>
<td>9</td>
<td>9*62/73 =8</td>
</tr>
<tr>
<td>7</td>
<td>Federal procurement and property Agency</td>
<td>18</td>
<td>18*62/73 = 15</td>
</tr>
</tbody>
</table>

**Total population/sample**

<table>
<thead>
<tr>
<th>Item no</th>
<th>Strata to be sampled</th>
<th>Population size</th>
<th>Proportional sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>73</td>
<td>62</td>
</tr>
</tbody>
</table>

### 3.3.1.2 Instrument design

This study used questionnaire, which is a widely used and useful instrument for collecting survey information. As Wilson and Mclean, (1994) stated, questionnaire could provide structured information, being administered without the presence of the researcher, and often comparatively straightforward to analyze.

Questionnaire as a tool for data collection has its own advantages and limitations. The advantages found from the literature includes that the data collected through the use of questionnaire are efficient, reliable because of anonymous, honest, economical (in terms of time and money), quick (even possibly mailed), consistent (little scope for bias), offers the possibility of standardizing and comparing scales, and enables the anonymity of the data sources to be preserved. Nevertheless, the major limitations are nonflexible (no longer possible to backtrack once the administration phase is under way), lack of qualitative depth, low response rate, inability to offset a lack of sufficient data or an error in the scale used (Thiétart et al. 2001; Cohen et al. 2000).

In terms of the conduct of the survey, this study employed structured and self-administration of the questionnaire. The researcher hand–delivered the questionnaire to each respondent in the sample.

As Kothari (2008) stated, questionnaires were used to manage time, energy and finance in a properly and economical manner. Similarly, it provides quantitative data, which is
very easy to collect. The study considered questionnaires, which have advantages over other types of research instruments. They are relatively cheaper, do not require as much effort from the questioner as face-to-face or telephone surveys, and often have standardized answers that make it simple to compile data. The quantitative data would have been a self-developed closed ended questionnaire contained items of 5-point Likert type (1- strongly disagree to 5- Strongly agree). The contains of questions was the first part contains questions about respondents profile, second section asks questions on record management, the third part asks about auditors competence, the fourth part asks about auditors independence, the fifth part asks about resource constraint and the sixth part asks about effectiveness of procurement auditing. All questions prepared in English language. The questionnaires were hand-delivered to the respondents and collected after a few days.

3.3.1.3 Data Analysis and Presentation method

Since objective of this study is to assess factors that affect effectiveness of procurement auditing in selected public sector institute in Ethiopia, descriptive statistics research design is more appropriate.

Descriptive statistics used to describe the data collected in research study and to accurately characterize the variables and to summarize a study population. In the research, raw data is changed into a data structure that enables to generate meaningful and useful bits of information.

A. Operational Definition and measurement of Variables

In this study, there were four independent variables and one dependent variable that are explained bellow.

Dependent Variable: Procurement Audit effectiveness refers an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations and provides useful audit findings. To measure procurement effectiveness the study has used closed ended questionnaire contained items of 5-point Likert type (1- strongly disagree to 5- Strongly agree) like The occurrence of fraud and corruption reduced in public sector procurement, in public procurement transparency and non-discriminatory enhanced from time to time, the procurement auditing in public sector achieves its goal and others and interview analysis.
Independent Variables:

**Record Management** refers to professional practice of managing the records of an organization throughout their life cycle from the time they are created to their eventual disposal (Megill, 2005). To measure procurement effectiveness the study has used closed ended questionnaire contained items of 5-point Likert type (1- strongly disagree to 5- Strongly agree) like there is an accurate procurement process records in public sector/ institutions you conduct procurement audit, there is a complete procurement process records in public sector/ institutions you conduct procurement audit, there is an efficient and effective procurement process record management system in public sector/ institutions you conduct procurement audit and others and interview analysis.

**Auditor Competency** is defined as a capability, ability or an underlying characteristic of an individual, which is casually related to effective or superior performance (Armstrong, 1995). To measure procurement effectiveness the study has used closed ended questionnaire contained items of 5-point Likert type (1- strongly disagree to 5- Strongly agree) like experienced auditors are participated in auditing process, there is professional communication between management and auditors, auditors are aware of various principles of risk assessment and appraisal as well as risk management in procurement process and others and interview analysis.

**Auditor independencies** define as the avoidance of any relationship which would be likely, even subconsciously, to impair the objectivity and exercising professional judgment ought to be free from all economic, financial and other relationships (Rocco et al., 1997). To measure procurement effectiveness the study has used closed ended questionnaire contained items of 5-point Likert type (1- strongly disagree to 5- Strongly agree) like the problem of rectify audit findings timely depended the performance of procurement auditing, the value of procurement auditing depends heavily on the independence of auditors in mind and appearance, top management protects auditor’s independence when undertaking audit duties and others and interview documentary analysis.

**Resource constraints** are defined as Lack of material, human resource, shortage of funding office supplies and office accommodation and (Hay & Davis, 2004). To measure procurement effectiveness the study has used closed ended questionnaire contained items of 5-point Likert type (1- strongly disagree to 5- Strongly agree) like in
your organization audit work budget not properly allocated, in your organization audit work budget is not release timely, audit work salary and benefit paid is not enough to encourage auditors to perform auditing and interview analysis.

3.3.2 Qualitative aspect: in-depth interview and documentary analysis

Qualitative research is used to describe or explain what is happening within a study area. Qualitative method mainly includes three kinds of data collection: in-depth interview, direct observation, and written documents (Patton 2003). As part of the qualitative aspect data was acquired through in-depth interviews and documentary analysis. The following discussions present the in-depth interview and document study.

An interview used to gather data about the thoughts, outlook and beliefs that the interviewees had about the factor affecting performance of procurement auditing. The interview permits greater depth of response which was not possible through any other means (Jacobs, 2005). Thus, the purpose of using interview in this study is to collect more supplementary opinion and information so as to stabilize the data collected through the questionnaire.

Thus, considering the advantages of its flexibility in which new questions could be forwarded during the interview session, in-depth interviews were held with selected top level managers. The interview session administered with 3 top level management of FPPA on face-to-face and one-to-one basis by the researcher. This has enabled the researcher to focuses on some specific issues to be raised for different interviewee’s separately during the interview session.

3.4 Link between Research Objective and Data Sources & conclusion

As stated in the first part of this report, the major objective of this study is to identify factors affecting effectiveness of public procurement auditing in selected public sectors institute in Ethiopia. With particular emphases on specific objective such as the resource constraints, auditors’ competence, record management and auditor’s independence affect the effectiveness of procurement auditing.
Table 3-2: Summary of the Link between Research Questions and Data Sources

<table>
<thead>
<tr>
<th>No</th>
<th>Research Questions</th>
<th>Source of Data</th>
<th>Data Collection Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How do resource constraints affect the effectiveness of procurement auditing in selected public sectors in Ethiopia?</td>
<td>Procurement auditors</td>
<td>Survey Questions from 1 to 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Top management</td>
<td>In-depth interview</td>
</tr>
<tr>
<td>2</td>
<td>Has Auditors’ Competence affect the effectiveness of procurement auditing in selected public sectors in Ethiopia?</td>
<td>Procurement auditors</td>
<td>Survey Questions from 1 to 12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Top management</td>
<td>In-depth interviews</td>
</tr>
<tr>
<td>3</td>
<td>To what extent record management affect the effectiveness of procurement auditing in selected public sectors in Ethiopia?</td>
<td>Procurement auditors</td>
<td>Survey Questions from 1 to 6</td>
</tr>
<tr>
<td>4</td>
<td>Does Auditors independence affect the effectiveness of procurement auditing in selected public sectors in Ethiopia?</td>
<td>Procurement auditors</td>
<td>Survey Questions from 1 to 9</td>
</tr>
<tr>
<td>5</td>
<td>Effectiveness of Public procurement Auditing</td>
<td>Procurement auditors</td>
<td>Survey Questions from 1 to 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Top management</td>
<td>In interviews</td>
</tr>
</tbody>
</table>

### 3.5 Ethical Consideration

The study do not abuse the respondents, fulfilling the promises what the study made to respondents, completing the interview, and questionnaires at the specified time, avoiding emotion, dishonest and unsuited behaviors, Ensuring to the respondents not to disclose their names, and personal information, In addition, full acknowledgment of all the reference materials used in the study to assess factors that affect effectiveness of procurement auditing.

### 3.6 Validity and Reliability

#### 3.6.1 Validity

To insure the statistical validity of the study, the study has collected quantitative data using survey questioner and interview and analysis the data using correct statistical instruments like descriptive statistics, inferential statistics, correlation and regression analysis to see the relationship of the variable and reach concrete conclusion.
3.6.2 Reliability

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings (Saunders et al., 2007). The data reliability test is measured by using Cronbach’s Alpha. Cronbach's Alpha was also calculated as part of the reliability test to assess how valid the results were and should produce similar generalized results if the sample size were increase (Field, 2006). The Alpha value is ranges from a maximum of 1.0 for a perfect score to minimum of zero, good measure of the alpha should be 0.70 or higher (Neuman, 2007). According to William and Barry (2010) scales exhibiting a coefficient alpha between 0.80 and 0.96 are considered to have very good reliability, between 0.70 and 0.80 are considered to have good reliability, and alpha value between 0.60 and 0.70 indicates fair reliability and when the coefficient alpha is below 0.60, the scale has poor reliability. Accordingly, the Cronbach’s Alpha values of the survey indicate good reliability and the result are presented in table 3.3.

Table 3-3: Cronbach’s Alpha value

<table>
<thead>
<tr>
<th>S. No</th>
<th>Variables</th>
<th>Cronbach’s Alpha Value</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Effectiveness of Procurement Auditing</td>
<td>.864</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Record Management</td>
<td>.756</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Auditors Competence</td>
<td>.836</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>Auditors Independence</td>
<td>.820</td>
<td>9</td>
</tr>
<tr>
<td>5.</td>
<td>Resource Constraint</td>
<td>.722</td>
<td>5</td>
</tr>
</tbody>
</table>

*Source: Survey Result, May 2017*

The Cronbach’s Alpha range value is between 0.722 and 0.864. Therefore, all variables are acceptable for further analysis.

3.7 Conclusion

In this chapter, research methodology options available to a researcher including quantitative, qualitative, and mixed method approach each using different knowledge claims, strategies of inquiry and analysis are discussed. The link of research questions
and research methods adopted in this particular study is also presented with proper justification in method selection in line with the strength and weakness of each research method. The required data is collected through survey questionnaire and in-depth interview. Descriptive and explanatory research design were carried out for this study.
CHAPTER FOUR

4 DATA PRESENTATION, ANALYSIS AND DISCUSSION

This chapter deals with presentations, discussion and interpretation of the data collected through questionnaire and interview. The discussion particularly focused on response rate, demographic characteristic of the respondents, relationships among the variables in the conceptual framework and correlation.

4.1 Results (survey and in-depth interview)

The following descriptive statistical analysis shows the conceptual framework adopted for this study. Particularly, the analysis demonstrates the research questions, which are response rate, demographic characteristic of the respondents, auditors’ competence, record managements, the effectiveness of procurement auditing, auditor’s independence, resource constraints and auditors from selected public bodies. To make discussions the study used mean and percentile. Auditors from PPA and selected 6 sub cities of Addis Ababa were asked to indicate the extent to assess factors that affects the effectiveness of public procurement auditing and effectiveness of public procurement auditing in public sectors.

4.1.1 The Response Rate

Table 4-1: Response Rate of questionnaires

<table>
<thead>
<tr>
<th>Statement</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Response</td>
<td>60</td>
<td>97%</td>
</tr>
<tr>
<td>Unreturned Response</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Total percentage</td>
<td>62</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Survey Data (2017)

For the purpose of this study, the researcher has distributed a total of 62 questionnaires to respondents. From the total number of 62 questionnaires that were distributed to the respondents. Totally 60 respondents were replies completed response and 2 were not replies or returned the questionnaires. In addition the information collected from 3 selected top managers through interview. The response rate for this study is 63 out of 65 or 97% response rate which was an excellent rate. Therefore, the study used 60 questionnaires and the information collected from 3 selected top managers through
interview to analysis the data, which is considering sufficient enough to conduct the study.

4.1.2 Demographic Characteristic of the Survey Respondents

In this section, the study analyzed and discussed general information of the respondents which are relevant to the study was summarized on the tables here below and the frequencies and percentages are calculated and described. Many of these variables are level of education, years of experience and current position to provide background information about the respondents to the reader and have no impact on the factors of the study.

Table 4-2: Demographic characteristic of the Respondents

<table>
<thead>
<tr>
<th>Education level of the respondents</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>13</td>
<td>21.7</td>
</tr>
<tr>
<td>BA Degree</td>
<td>36</td>
<td>60.0</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>11</td>
<td>18.3</td>
</tr>
<tr>
<td>PHD</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respondents position</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditors directorate Director</td>
<td>9</td>
<td>15.0</td>
</tr>
<tr>
<td>Senior auditor expert</td>
<td>19</td>
<td>31.7</td>
</tr>
<tr>
<td>Auditors Expert</td>
<td>32</td>
<td>53.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Experience</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 years</td>
<td>5</td>
<td>8.3</td>
</tr>
<tr>
<td>1-5 years</td>
<td>15</td>
<td>25.0</td>
</tr>
<tr>
<td>5-10 years</td>
<td>23</td>
<td>38.4</td>
</tr>
<tr>
<td>10-15 years</td>
<td>12</td>
<td>20.0</td>
</tr>
<tr>
<td>above 15 years</td>
<td>5</td>
<td>8.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Survey Data (2017)
According to the findings as presented in Table 4.2, 60% of the respondents are degree holders, 21.7% and 18.3% of the respondent are in diploma and master level respectively. This implies that almost all of the respondents are found in a good educational level that assures as they are able to understand about public procurement auditing, record management on public procurement, competency of the auditors, independence auditors on procurement auditing, resource constraint and effective public procurement auditing.

As table 4.2, about 53.3% of the respondents were auditor experts, 31.7% were senior experts and 15% were directors. From this anyone can understand that the majority were able with adequate designation authority. Thus, it is clear that the experienced and educated respondents could understand the problems in auditing function and can play a vital role in solution parts.

The above table 4.2, also shows 38.4% of respondents replied as they are within 5-10 Years of experience, 25% of them answered as they are within 1-5 years, 20% are 10-15 years, 8.3% are above 15 years and the remaining 8.3% have less than 1 years of work experience. This indicates that the majority (91.7%) of the respondents are above 5 years of work experiences.

4.1.3 Record Management & its effects on effectiveness of procurement auditing

From the descriptive analysis in Table 4.3 the about 93 % of the respondents did not agreed that there is an accurate procurement process records in public sector, there is a complete procurement process records in public sector, there is an efficient and effective procurement process record management system in public sector, in public sector record is managed centrally, in public sector record is kept in its category and assessing record/file easily in public sector to conduct procurement audit.

As can be seen in the bellow table the mean value 2 and less indicated that there is low level of the record management systems, mean value greater than 2 and less than 3 indicate moderate level of the record management systems and mean value greater than 3 indicate that there is high level of the record management systems. As summarized in the table 4.3 all variables accurate procurement process records, a complete procurement process records, efficient and effective procurement process record management system, record is managed centrally, record is kept in its category and assessing record/file easily in public sector have the mean value less than 2 and also
the overall mean is less than 2. This indicates that there is lack of well-organized record management system in public procurement.

**Table 4-3: Descriptive Analyses for Record Management**

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is an accurate procurement process records in public sector/ institutions you conduct procurement audit</td>
<td>60 (36)</td>
<td>33.3 (20)</td>
<td>1.7 (1)</td>
<td>5 (3)</td>
<td>0 (0)</td>
<td>1.52</td>
<td>0.770</td>
</tr>
<tr>
<td>There is a complete procurement process records in public sector/ institutions you conduct procurement audit</td>
<td>58.3 (35)</td>
<td>36.7 (23)</td>
<td>3.3 (2)</td>
<td>1.7 (1)</td>
<td>0 (0)</td>
<td>1.48</td>
<td>0.651</td>
</tr>
<tr>
<td>There is an efficient and effective procurement process record management system in public sector/ institutions you conduct procurement audit</td>
<td>63.3 (38)</td>
<td>35 (21)</td>
<td>0 (0)</td>
<td>1.7 (1)</td>
<td>0 (0)</td>
<td>1.4</td>
<td>0.588</td>
</tr>
<tr>
<td>In public sector/institutions you conduct procurement audit record is managed centrally</td>
<td>60 (36)</td>
<td>35 (21)</td>
<td>3.3 (2)</td>
<td>1.7 (1)</td>
<td>0 (0)</td>
<td>1.47</td>
<td>0.650</td>
</tr>
<tr>
<td>In public sector/ institutions you conduct procurement audit record is kept in its category</td>
<td>56.7 (34)</td>
<td>38.3 (23)</td>
<td>1.7 (1)</td>
<td>3.3 (2)</td>
<td>0 (0)</td>
<td>1.52</td>
<td>0.701</td>
</tr>
<tr>
<td>You can assess record/file easily in public sector/ institutions you conduct procurement audit</td>
<td>56.7 (35)</td>
<td>41.6 (25)</td>
<td>1.7 (1)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>1.45</td>
<td>0.534</td>
</tr>
<tr>
<td>Over all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.47</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Note: * Number of observations is provided in brackets

Source: Survey Data (2017)

**4.1.4 Auditors Competency & its effects on effectiveness of procurement auditing**

As summarized in the Table 4.4 the majority (more than 86%) of the respondents did not agreed that experienced auditors are participated in auditing process, there is professional communication between management and auditors, auditors are aware of various principles of risk assessment and appraisal as well as risk management in procurement process, auditors have evaluation skill in procurement specification and bill of quantity of procurement, auditors have a knowledge about public procurement process, auditors possess the ability to relate the organizations risk appetite to the application of controls in operational areas, there is knowledge on procurement process
analysis tools and techniques, auditors are proficient in problem-solving techniques and use of tools, auditors are proficient in data collection and analysis tools and techniques, auditors are proficient in techniques on control assessment and risk analysis, auditors are proficient in data mining and auditors are proficient in continuous/real-time auditing.

As can be seen in the table below (table 4.4) the mean value 2 and less indicated that there low level of auditors competency, mean value greater than 2 and less than 3 indicate moderate level of auditors competency and mean value greater than 3 indicate that there is high level of auditors competency. As summarized in the table 4.4 the mean value for auditors experience who are participated in auditing process, professional communication between management and auditors, aware of auditors on various principles of risk assessment and appraisal as well as risk management in procurement process, auditors evaluation skill in procurement specification and bill of quantity of procurement, auditors knowledge about public procurement process, auditors ability to relate the organizations risk appetite to the application of controls in operational areas, knowledge on procurement process analysis tools and techniques, auditors are proficient in problem-solving techniques and use of tools, in data collection and analysis tools and techniques, in techniques on control assessment and risk analysis, in data mining and in continuous/real-time auditing were less than 2 and also the overall mean were less than 2. This indicates that lack of auditors experience who are participated in auditing process, lack of professional communication between management and auditors, lack of awareness of auditors on various principles of risk assessment and appraisal as well as risk management in procurement process, lack of auditors evaluation skill in procurement specification and bill of quantity of procurement, lack of auditors knowledge about public procurement process, lack of auditors ability to relate the organizations risk appetite to the application of controls in operational areas, lack of knowledge on procurement process analysis tools and techniques, lack of auditors are proficient in problem-solving techniques and use of tools, in data collection and analysis tools and techniques, in techniques on control assessment and risk analysis, in data mining and in continuous/real-time auditing are the main challenges in public procurement auditing. In generally from this one can understand that majority of the respondent who participated on public procurement auditing are not competent enough to conduct effective auditing.
Table 4-4: Descriptive Analysis for Auditors competency

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced auditors are participated in auditing process</td>
<td>36.7 (22)</td>
<td>63.3 (38)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.63</td>
<td>0.486</td>
</tr>
<tr>
<td>There is professional communication between management and auditors.</td>
<td>45 (27)</td>
<td>55 (33)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.55</td>
<td>0.502</td>
</tr>
<tr>
<td>Auditors are aware of various principles of risk assessment and appraisal as well as risk management in procurement process</td>
<td>33.3 (20)</td>
<td>61.7 (37)</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>1.77</td>
<td>0.698</td>
</tr>
<tr>
<td>Auditors have evaluation skill in procurement specification and bill of quantity of procurement</td>
<td>30 (18)</td>
<td>70 (42)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.7</td>
<td>0.462</td>
</tr>
<tr>
<td>Auditors have a knowledge about public procurement process</td>
<td>41.7 (25)</td>
<td>56.6 (34)</td>
<td>0</td>
<td>1.7</td>
<td>0</td>
<td>1.62</td>
<td>0.585</td>
</tr>
<tr>
<td>Auditors possess the ability to relate the organizations risk appetite to the application of controls in operational areas</td>
<td>40 (24)</td>
<td>60 (36)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.6</td>
<td>0.494</td>
</tr>
<tr>
<td>There is knowledge on procurement process analysis tools and techniques</td>
<td>33.3 (20)</td>
<td>61.7 (37)</td>
<td>0</td>
<td>6.7</td>
<td>0</td>
<td>1.8</td>
<td>0.755</td>
</tr>
<tr>
<td>Auditors are proficient in problem-solving techniques and use of tools</td>
<td>40 (24)</td>
<td>53.3 (32)</td>
<td>0</td>
<td>6.7</td>
<td>0</td>
<td>1.73</td>
<td>0.778</td>
</tr>
<tr>
<td>Auditors are proficient in data collection and analysis tools and techniques</td>
<td>36.7 (22)</td>
<td>55 (33)</td>
<td>0</td>
<td>8.3</td>
<td>0</td>
<td>1.8</td>
<td>0.819</td>
</tr>
<tr>
<td>Auditors are proficient in techniques on control assessment and risk analysis</td>
<td>28.3 (17)</td>
<td>61.7 (37)</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>1.92</td>
<td>0.829</td>
</tr>
<tr>
<td>Auditors are proficient in data mining</td>
<td>53.3 (32)</td>
<td>41.7 (25)</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>1.52</td>
<td>0.745</td>
</tr>
<tr>
<td>Auditors are proficient in continuous/real-time auditing</td>
<td>33.4 (20)</td>
<td>63.3 (38)</td>
<td>0</td>
<td>3.3</td>
<td>0</td>
<td>1.73</td>
<td>0.634</td>
</tr>
</tbody>
</table>

Over all                                                                 1.7  0.65

Note: * Number of observations is provided in brackets Source: Survey Data (2017)
In addition to that above presented facts from interview participant’s they inform that; The professional skills from auditors are required since audit assures outsiders that the financial statements are free from material misstatements, the value of an audit depends on the outsiders ex-ante perception of; the probability that the auditor will discover the breaches or errors in the reporting system and on the probability that the auditor will report the discovered breaches or errors. However, there is a knowledge gape like: procurement process analysis tools and techniques, evaluation skill in procurement specification and bill of quantity of procurement, ability to relate the organizations risk appetite to the application of controls in operational areas and techniques on control assessment and risk analysis. From these anyone can understand that auditors who involve in public procurement auditing process is not competent enough to carry out effective auditing.

4.1.5 Auditors Independence and its effects on effectiveness of procurement auditing

As summarized in the Table 4.5 the majority (more than 90%) of the respondents did not agreed that the value of procurement auditing depends heavily on the independence of auditors in mind and appearance, top management protects auditor’s independence when undertaking audit duties, auditors are sufficiently immune from any internal pressure to undertake audits and are report findings and recommendations objectively without fear of reprisal, auditors permitted to audit operations which they have undertaken, auditors are segregated from functional and management decisions (e.g. as heads of operational working groups in administrative reform projects), chief audit executive has adequate powers in establishing audit plans, auditor has free and unrestricted access to all operations, personnel assets and transaction records and auditors are adequately graded and remunerated according to their roles and responsibilities.

As can be seen in the table below (Table 4.5) the mean value 2 and less indicated that there low level of auditors independence, mean value greater than 2 and less than 3 indicate moderate level of auditors independence and mean value greater than 3 indicate that there is high level of auditors independence. As summarized in the table 4.5 the mean value for the value of procurement auditing depends heavily on the independence of auditors in mind and appearance, top management protects auditor’s independence when undertaking audit duties, auditors are sufficiently immune from
any internal pressure to undertake audits and are report findings and recommendations objectively without fear of reprisal, auditors permitted to audit operations which they have undertaken, auditors are segregated from functional and management decisions (e.g. as heads of operational working groups in administrative reform projects), chief audit executive has adequate powers in establishing audit plans, auditor has free and unrestricted access to all operations, personnel assets and transaction records and auditors are adequately graded and remunerated according to their roles and responsibilities were less than 2 and also the overall mean for auditors independence is less than 2. This implies that there is a lack of independence of auditors in mind and appearance, lack of top management protects for auditor’s independence when undertaking audit duties, internal pressure for auditors to undertake audits and to report findings and recommendations objectively without fear of reprisal, lack of permeation for auditors to audit operations which they have undertaken, lack of auditors participation on functional and management decisions (e.g. as heads of operational working groups in administrative reform projects), inadequate powers of chief audit executive in establishing audit plans, lack of freedom and restricted access of auditor to all operations, personnel assets and transaction records and lack of adequate grading and remuneration of auditors according to their roles and responsibilities. In generally from this one can understand that there is no freedom of auditors on public procurement auditing.

**Table 4-5: Descriptive Analysis for Auditors Independence**

<table>
<thead>
<tr>
<th>Statements</th>
<th>% Strongly Disagree</th>
<th>% Disagree</th>
<th>% Neutral</th>
<th>% Agree</th>
<th>% Strongly Agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The problem of rectify audit findings timely depended the performance of procurement auditing</td>
<td>48.3 (29)</td>
<td>50 (30)</td>
<td>0 (0)</td>
<td>1.7 (1)</td>
<td>0</td>
<td>1.55</td>
<td>0.594</td>
</tr>
<tr>
<td>The value of procurement auditing depends heavily on the independence of auditors in mind and appearance.</td>
<td>51.7 (31)</td>
<td>38.3 (23)</td>
<td>1.7 (1)</td>
<td>8.3 (5)</td>
<td>0</td>
<td>1.67</td>
<td>0.877</td>
</tr>
<tr>
<td>Top management protects auditor’s independence when undertaking audit duties.</td>
<td>60 (36)</td>
<td>33.3 (20)</td>
<td>0 (0)</td>
<td>6.7 (4)</td>
<td>0</td>
<td>1.53</td>
<td>0.812</td>
</tr>
<tr>
<td>Statements</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td>Mean</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>----------</td>
<td>---------</td>
<td>-------</td>
<td>----------------</td>
<td>------</td>
<td>-------------------</td>
</tr>
<tr>
<td>auditors are sufficiently immune from any internal pressure to undertake audits and are report findings and recommendations objectively without fear of reprisal</td>
<td>61.6 (37)</td>
<td>35 (21)</td>
<td>1.7 (1)</td>
<td>1.7 (1)</td>
<td>0</td>
<td>1.43</td>
<td>0.621</td>
</tr>
<tr>
<td>Your organization does permit auditors to audit operations which they have undertaken</td>
<td>68.3 (41)</td>
<td>28.4 (17)</td>
<td>0 (0)</td>
<td>3.3 (2)</td>
<td>0</td>
<td>1.38</td>
<td>0.666</td>
</tr>
<tr>
<td>auditors are segregated from functional and management decisions (e.g. as heads of operational working groups in administrative reform projects);</td>
<td>50 (30)</td>
<td>46.7 (28)</td>
<td>1.7 (1)</td>
<td>1.7 (1)</td>
<td>0</td>
<td>1.55</td>
<td>0.622</td>
</tr>
<tr>
<td>Chief Audit Executive (CAE) has adequate powers in establishing audit plans</td>
<td>31.7 (17)</td>
<td>56.7 (34)</td>
<td>0 (0)</td>
<td>11.6 (7)</td>
<td>0</td>
<td>1.92</td>
<td>0.889</td>
</tr>
<tr>
<td>auditors are adequately graded and remunerated according to their roles and responsibilities</td>
<td>45 (27)</td>
<td>51.7 (31)</td>
<td>0 (0)</td>
<td>6.7 (4)</td>
<td>0</td>
<td>1.68</td>
<td>0.792</td>
</tr>
<tr>
<td>Auditor has free and unrestricted access to all operations, personnel, assets and transaction records</td>
<td>38.3 (23)</td>
<td>51.8 (31)</td>
<td>0 (0)</td>
<td>10 (6)</td>
<td>0</td>
<td>1.82</td>
<td>0.873</td>
</tr>
<tr>
<td></td>
<td>Over all</td>
<td>1.6</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * Number of observations is provided in brackets Source: Survey Data (2017)

### 4.1.6 Resource constraint and its effects on effectiveness of procurement auditing

As summarized in the Table 4.6 the majority (more than 90%) of the respondents assures that audit work budget not properly allocated and not release timely, audit work salary and benefit paid is not enough to encourage auditors to perform auditing, time is not properly allocated for conduct procurement audit, lack of enough staff to carry out auditing function and on procurement audit engagement there is no sufficient resource like vehicles, computer, laptop, paper, printer telephone and others are available.
As shown in the table below (table 4.6) the mean value 2 and less indicated that there low level of resource constraint, mean value greater than 2 and less than 3 indicate moderate level of resource constraint and mean value greater than 3 indicate that there is high level of resource constraint. As summarized in the table 4.6 the mean value for audit work budget not properly allocated and not release timely, audit work salary and benefit paid is not enough to encourage auditors to perform auditing, time is not properly allocated for conduct procurement audit, lack of enough staff to carry out auditing function and on procurement audit engagement there is no sufficient resource like vehicles, computer, laptop, paper, printer telephone and others are available were greater than 3 even greater than 4 and also the overall mean for resource constraint is greater than 4. This shows that improper allocation of audit work budget and time, lack of enough audit work salary and benefit to encourage auditors to perform auditing, lack of enough staff to carry out auditing function and on procurement audit engagement lack of sufficient resource like vehicles, computer, laptop, paper, printer telephone and others are identified as constraint. In generally majority of the respondents assure that there are resource constraints on public procurement auditing function.

In addition to the above facts interview participants were asked about the issue under investigation, they replied as follow; Respondents point at financial and logistical constraints as one of the major challenges confronting the audit service in the performance of public procurement audits.

The major resource constraints enumerated are: inadequate funding and late release of funds; lack of requisite staff; inadequate office supplies; insufficient office accommodation and; short supply of office vehicles.

To sum up, from the analysis the above table and interview we can understand that majority of respondents agreed that resource constraints as one of the major challenges confronting the audit service in the performance of public procurement audits at selected public sectors.
Table 4-6: Descriptive Analyses for Resource constraint

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In your organization audit work budget not properly allocated</td>
<td>0 (0)</td>
<td>1.7 (1)</td>
<td>0 (0)</td>
<td>45 (27)</td>
<td>53.3 (32)</td>
<td>4.5</td>
<td>0.597</td>
</tr>
<tr>
<td>In your organization audit work budget is not release timely</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>53.3 (32)</td>
<td>46.7 (28)</td>
<td>4.47</td>
<td>0.503</td>
</tr>
<tr>
<td>audit work salary and benefit paid is not enough to encourage auditors to perform auditing</td>
<td>0 (0)</td>
<td>3.3 (2)</td>
<td>0 (0)</td>
<td>41.7 (25)</td>
<td>55 (33)</td>
<td>4.48</td>
<td>0.676</td>
</tr>
<tr>
<td>time is not properly allocated for conduct procurement audit</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>58.3 (35)</td>
<td>41.7 (25)</td>
<td>4.42</td>
<td>0.497</td>
</tr>
<tr>
<td>In your organization there is lack of enough staff to carry out auditing function</td>
<td>0 (0)</td>
<td>10 (6)</td>
<td>0 (0)</td>
<td>55 (33)</td>
<td>35 (21)</td>
<td>4.15</td>
<td>0.860</td>
</tr>
<tr>
<td>On procurement audit engagement there is no sufficient resource like vehicles, computer, laptop, paper, printer, telephone and others are available.</td>
<td>0 (0)</td>
<td>1.7 (1)</td>
<td>0 (0)</td>
<td>48.3 (29)</td>
<td>50 (30)</td>
<td>4.47</td>
<td>0.596</td>
</tr>
<tr>
<td>Over all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.42</td>
<td>0.62</td>
</tr>
</tbody>
</table>

Source: Survey Data (2017)

4.1.7 Effectiveness of procurement Auditing

As summarized in the Table 4.7 the majority (more than 96%) of the respondents did not agreed that the occurrence of fraud and corruption reduced in public sector procurement, in public procurement transparency and non-discriminatory enhanced from time to time, the procurement auditing in public sector achieves its goal, there is timeliness in issuing audit reports, there is high efficiency based on number of hours spent and coverage in audit activities and there is timeliness in the undertaking of satisfaction surveys.

In the table below (table 4.7) the mean value 2 and less indicated that there low level of effective public procurement auditing, mean value greater than 2 and less than 3 indicate moderate level of effective public procurement auditing and mean value greater than 3 indicate that there is high level of effective public procurement auditing. As indicated in the table 4.7 the mean value for the occurrence of fraud and corruption reduced in public sector procurement, in public procurement transparency and non-discriminatory enhanced from time to time, the procurement auditing in public sector
achieves its goal, there is timeliness in issuing audit reports, there is high efficiency based on number of hours spent and coverage in audit activities and there is timeliness in the undertaking of satisfaction surveys were less than 2 and the overall mean for effective public procurement auditing is less than 2. This indicates that the occurrence of fraud and corruption not reduced in public sector procurement, in public procurement there is lack of transparency and non-discriminatory, the procurement auditing in public sector did not achieve its goal, there is lack of timeliness in issuing audit reports, the auditing function inefficiency based on number of hours spent and coverage in audit activities and also there is lack of timeliness in the undertaking of satisfaction surveys In generally majority of the respondents assure that public procurement auditing function is not effective.

Table 4-7: Descriptive Analyses for Effectiveness of procurement Auditing

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The occurrence of fraud and corruption reduced in public sector procurement</td>
<td>48.3% (29)</td>
<td>50% (30)</td>
<td>0%</td>
<td>1.7%</td>
<td>0%</td>
<td>1.55</td>
<td>0.594</td>
</tr>
<tr>
<td>In public procurement transparency and non-discriminatory enhanced from time to time</td>
<td>38.3% (23)</td>
<td>61.7% (37)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1.62</td>
<td>0.490</td>
</tr>
<tr>
<td>The procurement auditing in public sector achieves its goal</td>
<td>43.3% (26)</td>
<td>56.7% (34)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1.57</td>
<td>0.500</td>
</tr>
<tr>
<td>There is timeliness in issuing audit reports</td>
<td>50% (30)</td>
<td>50% (30)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1.5</td>
<td>0.504</td>
</tr>
<tr>
<td>There is high efficiency based on number of hours spent and coverage in audit activities</td>
<td>46.6% (28)</td>
<td>51.7% (31)</td>
<td>0%</td>
<td>1.7%</td>
<td>0%</td>
<td>1.57</td>
<td>0.593</td>
</tr>
<tr>
<td>There is timeliness in the undertaking of satisfaction surveys</td>
<td>41.7% (28)</td>
<td>58.3% (35)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1.58</td>
<td>0.497</td>
</tr>
<tr>
<td>Over all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.57</td>
<td>0.53</td>
</tr>
</tbody>
</table>

Note: * Number of observations is provided in brackets

Source: Survey Result (2017)

In addition to the above facts interview participants were asked about the issue under investigation, they replied as follow; Respondents point PPA not achieved its objective effective public procurement auditing 100% due to many challenges such as in public sector the experts who carry out procurement process have lack knowledge on public
procurement process and principles, high turnover of audit experts in PPA and experienced procurement experts in public sector who carry out procurement, low salary of audit experts, some resource constraint and others.

To sum up, from the analysis the above table and interview we can understand that majority of respondents agreed that public procurement auditing function is not effective at selected public sectors.

4.1.8 Tests and Analysis to examine the factors of effectiveness of procurement auditing

A. Descriptive Statistics

The study was evaluated *Effective public procurement auditing* factors by analyzed the following four independent variables.

Table 4-8: Effective public procurement auditing Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement audit (effectiveness)</td>
<td>60</td>
<td>1</td>
<td>3.24</td>
<td>1.57</td>
<td>0.349</td>
</tr>
<tr>
<td>Record Management</td>
<td>60</td>
<td>1</td>
<td>3.21</td>
<td>1.56</td>
<td>.0.348</td>
</tr>
<tr>
<td>Auditors’ Competence</td>
<td>60</td>
<td>1</td>
<td>2.75</td>
<td>1.78</td>
<td>.0.308</td>
</tr>
<tr>
<td>Auditor’s Independence</td>
<td>60</td>
<td>1</td>
<td>3.11</td>
<td>1.63</td>
<td>.0.366</td>
</tr>
<tr>
<td>Resource Constraint</td>
<td>60</td>
<td>3.5</td>
<td>4.87</td>
<td>4.39</td>
<td>.0.288</td>
</tr>
</tbody>
</table>

*Source: Survey Result, May 2017*

The mean and standard deviation of various indicators shown in table 4.8 indicate higher means on Auditors Competency (1.78) and Auditor's Independence (1.63) having the lowest factors of effective public procurement auditing compare with the remaining other two variables. The standard deviation values also indicate that most of the respondents agree to the attributes. The low mean on Record Management measurements (1.56) and the higher mean on Resource Constraint (4.39) had high
factors effective of public procurement auditing. Hence, the data indicate that most of respondents agreed on effective public procurement auditing are highly affected by Record Management, Auditors Competency, Auditors Independence and Resource Constraint.

4.1.8 Correlations Analysis

The correlation of the variable is measured by Spearman’s correlation coefficient. The result of the Spearman’s correlation is presented on following tables and interpreted by the guide line suggested by Field (2006); he mentioned that the Spearman’s correlation coefficient is shown the relationship between the predictor and outcome variable. The relationship is measured in the range of 0.1 to 0.29 is weak relationship, 0.30 to 0.49 is moderate, above 0.50 shows strong relationship; while the positive and negative sign is for the direction of their relationship (Field, 2006).

Table 4-9: Correlation table

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>RCM</th>
<th>ADC</th>
<th>ADI</th>
<th>RSC</th>
<th>EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM Correlation Coefficient</td>
<td>1.000</td>
<td>.175</td>
<td>.268*</td>
<td>-.100</td>
<td>.432**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.</td>
<td>.181</td>
<td>.039</td>
<td>.447</td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>ADC Correlation Coefficient</td>
<td>.175</td>
<td>1.000</td>
<td>.453**</td>
<td>-.209</td>
<td>.415**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.181</td>
<td>.</td>
<td>.000</td>
<td>.109</td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>ADI Correlation Coefficient</td>
<td>.268*</td>
<td>.453**</td>
<td>1.000</td>
<td>-.493**</td>
<td>.599**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.039</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>RSC Correlation Coefficient</td>
<td>-.100</td>
<td>-.209</td>
<td>-.493**</td>
<td>1.000</td>
<td>-.506**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.447</td>
<td>.109</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>EPA Correlation Coefficient</td>
<td>.432**</td>
<td>.415**</td>
<td>.599**</td>
<td>-.506**</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>
Correlation is significant at the 0.05 level (2-tailed).

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

*Source: Survey Result (2017)*

Spearman’s product moment correlation coefficient ($r_s$) was used to determine the strength of relationship between the dependent (Effectiveness of public procurement auditing) and independent variables (Record management, Auditors competency, auditors independence and Resource constraint). It is a non parametric technique which gives a measure of the strength of association between two variables.

As it can be shown in the above correlation matrix, each variable is correlated with itself. Record management is positively and significantly related to effective procurement auditing with Spearman’s correlation coefficient of $r_s = 0.432$, $P<0.01$, and also, there is found to be a positive correlation and significant relation between auditors competency and effective procurement auditing as shown by a correlation figure of $r_s = 0.415$, $P<0.01$. This shows that there was positive correlation or strong relationship between auditors competency and effective procurement auditing, auditors independence is positively and significantly related to effective procurement auditing with Spearman’s correlation coefficient of $r_s = 0.599$, $P<0.01$, there is found to be a negative correlation and significant relation between resource constraint and effective procurement auditing as shown by a correlation figure of $r_s = -0.506$, $P<0.01$. This shows that there was negative correlation between resource constraint and effective procurement auditing.

4.2 DISCUSSION

4.2.1 Record Management

Well-managed procurement record management system will enable the physical and logical control of records and prevent unauthorized access, tampering, loss, misplacement or destruction of documents. Unorganized and poorly managed records lead to inability to access information needed to support policy formulation, implementation and delivery of programs and services.

Sound records management is a critical component for good governance, effective and efficient administration, transparency, accountability and delivery of quality services to the citizens. Good record keeping practices contribute to the following:- creation and
maintenance of accurate and reliable information; easy accessibility to information and
Transparency and accountability Procurement units and procuring entities
performing their functions efficiently, availability of authentic, reliable and tangible
records to fight corruption and resources being matched to objectives. Proper records
management is essential for ensuring transparency and probity in the procurement and
financial management.

Records are important for accountability and are a powerful deterrent against
procurement and financial malpractices. Weak records management practices mean
officials cannot be held accountable for their actions (PPOA, 2008). As a test result
record management is positively and significantly related to effective procurement
auditing. However there is no well-organized record management system in public
procurement meaning there is no a complete procurement process records, procurement
process record management system is not efficient and effective, it is not managed
centrally, it is not kept in its category and not easy to assessing the records in public
sector to conduct procurement audit.

4.2.2 Auditors Competency

Competency is defined as a capability, ability or an underlying characteristic of an
individual, which is casually related to effective or superior performance (Armstrong
and Baron, 1995). Competencies are divided into two categories; technical and
behavioural competency. Public procurement audit professionals have to strive to
achieve three competing demands of meeting commercial interests with key themes of
value for money, economy, efficiency and effectiveness; the regulatory interests with
key themes of competition, transparency, equality and compliance and the social
interests whose key themes include public interest, employment concerns, social
exclusion, economic development and environment policy.

According to the respondent to overcome this problem employ professional auditors to
undertake public procurement audit and facilitate their continuous (long and short time)
training to ensure they are well equipped with necessary technical skills. Continuing
education ensures that auditors routinely undergo training to continuously maintain and
enhance their professional capabilities (Wee, 2002). And also as a test result positive
correlation and significant relation between auditors competency and effective
procurement auditing. However, lack of auditors experience who are participated in
auditing process, lack of professional communication between management and auditors, lack of awareness of auditors on various principles of risk assessment and appraisal as well as risk management in procurement process, lack of auditors evaluation skill in procurement specification and bill of quantity of procurement, lack of auditors knowledge about public procurement process, lack of auditors ability to relate the organizations risk appetite to the application of controls in operational areas, lack of knowledge on procurement process analysis tools and techniques, lack of auditors are proficient in problem-solving techniques and use of tools, in data collection and analysis tools and techniques, in techniques on control assessment and risk analysis, in data mining and in continuous/real-time auditing are the main challenges in public procurement auditing at selected public sector. In generally there is a knowledge gape like: procurement process analysis tools and techniques, evaluation skill in procurement specification and bill of quantity of procurement, ability to relate the organizations risk appetite to the application of controls in operational areas and techniques on control assessment and risk analysis.

4.2.3 Auditors Independent

An independent audit committee enhances the independence of external auditor, and ensures that auditor is free from management influence. The committee can conduct informal and private meetings without the presence of the company’s management to encourage the external auditor to be transparent on material issues at an early stage.

Governmental entities should undertake a full-scale competitive process for the selection of independent auditors at the end of the term of each audit contract, consistent with applicable legal requirements. Ideally, auditor independence would be enhanced by a policy requiring that the independent auditor be replaced at the end of the audit contract, as is often the case in the private sector. As a test result auditors independence is positively and significantly related to effective procurement auditing. However, as a descriptive statistics shown in the above in the public sector procurement auditing there is a lack of independence of auditors in mind and appearance, lack of top management protects for auditor’s independence when undertaking audit duties, internal pressure for auditors to undertake audits and to report findings and recommendations objectively without fear of reprisal, lack of permeation for auditors to audit operations which they have undertaken, lack of auditors participation on functional and management decisions (e.g. as heads of operational
working groups in administrative reform projects), inadequate powers of chief audit executive in establishing audit plans, lack of freedom and restricted access of auditor to all operations, personnel assets and transaction records and lack of adequate grading and remuneration of auditors according to their roles and responsibilities.

4.2.4 Resource Constraint

Auditors are confident that large audit organization has greater monitoring and bonding in order to capture higher audit quality (Hay & Davis, 2004). Moreover, as a test result that there was negative correlation between resource constraint and effective procurement auditing. Meaning inadequate funding and late release of funds; lack of requisite staff; inadequate office supplies; insufficient office accommodation and; short supply of office vehicles decreases the effectiveness of procurement auditing. In generally as the shortage of resources increase the effectiveness of procurement auditing decrease. However, in the study area there is inadequate funding and late release of funds; lack of requisite staff; inadequate office supplies; insufficient office accommodation and; short supply of office vehicles.

4.2.5 Effectiveness of Procurement Auditing

Manasseh (2007) concur that a public audit is considered effective if it accomplishes the intended results of fostering good governance and effective accountability in the management of public resources timely, with minimal cost, generates quality reports (showing control gaps and how to address them), prevents occurrence of fraud and embraces the use of information and communication technology. The success of an audit depends on the conduct of the client. Such conduct determines the internal control system in place and the quality of record keeping (Johnstone, 2006; Cole, 2008). However, the occurrence of fraud and corruption not reduced in public sector procurement, in public procurement there is lack of transparency and non-discriminatory, the procurement auditing in public sector did not achieve its goal, there is lack of timeliness in issuing audit reports, the auditing function inefficiency based on number of hours spent and coverage in audit activities and also there is lack of timeliness in the undertaking of satisfaction surveys In generally majority of the respondents assure that public procurement auditing function is not effective.
CHAPTER FIVE

5 CONCLUSION AND RECOMMENDATIONS

This chapter presents a summary of the findings, conclusions and recommendations made to help and improve the effectiveness of public procurement auditing in public sector based on the objectives of the study. The chapter also concludes with recommended areas for further research work.

5.1 Conclusion

Generally, this study has tried to identify the factors affecting the effectiveness of public procurement auditing of the selected public organizations. According to data analysis in the previous sections summary of findings is presented as follows.

From the findings, majority of respondents assure that the procurement auditing in selected public sectors is not effective

Secondly, the study also found out there was poor procurement process records; record is not managed centrally and not kept in its category at selected public sectors.

Thirdly, the study also found out lack of competency of auditors characterized by lack of experience auditors, lack of professional communication between management and auditors, lack of awareness of various principles of risk assessment and appraisal as well as risk management in procurement process and lack of knowledge on procurement process analysis tools and techniques at selected public sectors.

Fourthly, the study also found out lack of auditors independence characterized by lack of top management protects for auditor’s independence when undertaking audit duties, lack of sufficiently immune for auditors from any internal pressure to undertake audits and are report findings, lack of permeation for auditors to audit operations which they have undertaken and lack of freedom and restricted access for auditor to all operations at selected public sectors.

Fifthly, the study also found out resource constraints characterized by lack of proper allocation of audit work budget and time, not releasing budget timely, lack of enough salary and benefit paid to auditors, lack of enough staff to carry out auditing function
and lack of sufficient resource like vehicles, computer, laptop, paper, printer, telephone and others are available at selected public sectors.

The study concludes that record management, auditors’ competence and auditor’s independence positively affect public procurement effectiveness at selected public sectors and resource constraints negatively affect public procurement effectiveness at selected public sectors.

The most important factor analyzed based on the following factors: public sectors role in accurate procurement process records, record is managed centrally and record is kept in its category are related with record management. As a result, poor procurement process records, record is not managed centrally and record is not kept in its category are greatly affect public procurement effectiveness at selected public sectors.

The study found out that there were resource constraints in procurement auditing in selected public sectors like lack of proper allocation of audit work budget and time, not releasing budget timely, lack of enough salary and benefit paid to auditors, lack of enough staff to carry out auditing function and lack of sufficient resource like vehicles, computer, laptop, paper, printer, telephone and others are greatly affect public procurement effectiveness at selected public sectors.

The study further concluded that one of the major setbacks in selected public sectors to carry out effective public procurement auditing lack of auditors competence and auditors independence.

5.2 Recommendations

Based on finding of the study, conclusion drawn in line with the study objectives, the following points are recommended for PPA, other public bodies that carry out procurement auditing, public bodies that carry out procurement in order to improve procurement auditing effectiveness.

- The study established that auditor’s competence, auditor’s independence and resource constraint affects procurement auditing effectiveness to a large extent. The study recommends that within this fact the PPA and other public bodies that carry out procurement auditing should properly allocate audit work budget and time, release budget timely, paid enough salary and benefit to auditors, maintain enough staff and sufficient resource like vehicles, computer, laptop, paper, printer and telephone. This
will help to achieve high levels of efficiency and effectiveness in procurement auditing.

- Top management PPA and other public bodies that carry out procurement auditing should protect auditor’s independence when undertaking audit duties and from any internal pressure to undertake audits that helps to auditors to take professional action on auditing function.

- Finally, the study recommends that the PPA and other public bodies that carry out procurement auditing should maintain long and short time training for audit experts in order to improve professional communication between management and auditors, provide awareness for auditors in various principles of risk assessment and appraisal as well as risk management in procurement process and increase the knowledge for auditors on procurement process analysis tools and techniques.

Since procurement auditing by its nature provides a number of advantages (helps to improve procurement procedures, to increase knowledge on procurement process and to comply with procurement principle) to the public bodies that carry out procurement. The study established that record management affects procurement auditing effectiveness to a large extent. As a result the study recommends that;

- The study recommends that the Public Bodies who carry out procurement should maintain complete and accurate, procurement process records that helps to carry out efficient and effective procurement auditing

- Finally, the study recommends that the Public Bodies who carry out procurement should manage procurement record centrally and kept procurement records in its category which helps to assess record/file easily not only for auditing purpose but also for any purpose.

5.3 Suggestion for Further Study

The scope of this research was attempted to assess factors affecting public procurement auditing effectiveness in Federal Public Procurement and Property Administration and only seven sub city of Addis Ababa. The study found that the variables considered; record management, auditor’s competence, auditor’s independence and resource constraint accounted for 67.7% variability in procurement auditing effectiveness; implying that the 32.3% could be due to other factors beyond the scope of this study.
Further research is recommended on factors such as, legal issues toward procurement auditing, ethics of auditors, auditor’s working environment and etc.
REFERENCES


Adotévi (2009), procurement activities in marketng in underdeveloprd countries.


(Daniel, 2014). risks to public procurement due to poor audit practices include: waste of public resources; lack of fair and transparent procurement process


Hay (2004). The Voluntary choice of an auditor of any level of quality. Auditing:


http://www.ippas.ws/IPPC1/PROCEEDING%20PAPERS/Adot__vi.pdf,


iii


Nankunda (2013). Research on Internal Audit Function and Financial Performance


Nigerian Study Global Journal of Management and Business Research

iv


Sabine Adotévi , 27/11/2010, PUBLIC PROCUREMENT PERFORMANCE.


Thietart et al, (2001); Doing management research a comprehensive guide ; Sage Publications,London


APPENDIX

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE
MA IN ACCOUNTING AND AUDITING

SURVEY QUESTIONNAIRE

Dear Participants

The title of this thesis is “Factors affecting public procurement auditing in selected public sector.” The name of the researcher is Zeleke Tafese, who is currently an MSc in Accounting and Auditing student in Addis Ababa University.

The aim of this project is to assess Factors affecting public procurement auditing. This questionnaire is prepared to supplement the data obtained from other sources.

This survey questionnaire is being distributed to get relevant information from respondents and participation is totally voluntary. The investigator respectfully requests your kind cooperation in answering the whole question as frankly as possible and your response will be recorded anonymously and strict confidentiality will be maintained.

For further information, please contact using the following address:

Tel. (mobile): 0911-87-12-61
E mail: ztafese@gmail.com

Thank you in Advance.
PART ONE: BACKGROUND INFORMATION

1. Level of education
   
   1. Diploma □ 3. Master’s Degree □
   2. BA Degree □ 4. PHD □
   5. If other please specify------------------

2. Your current position in the organization.
   
   1. Auditors directorate Director □ 2. Senior auditor expert □
   3. Auditors Expert □ 4. If other please specify ---------

3. Indicate your experience in auditing
   
   1. Less than 1 year □ 3. 5-10 year □ 4. 10-15 Year □
   2. 1-5 year □ 5. Above 15 years □

PART TWO: QUESTIONNAIRE: - Questions related to factors impacting on procurement audit

SECTION A. Record Management

<table>
<thead>
<tr>
<th>No</th>
<th>state your agreement or disagreement to the following statements</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There is an accurate procurement process records in public sector/ institutions you conduct procurement audit</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>There is a complete procurement process records in public sector/ institutions you conduct procurement audit</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

viii
<table>
<thead>
<tr>
<th>No</th>
<th>state your agreement or disagreement to the following statements</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>There is an efficient and effective procurement process record management system in public sector/institutions you conduct procurement audit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>In public sector/institutions you conduct procurement audit record is managed centrally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>In public sector/institutions you conduct procurement audit record is kept in its category</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>You can assess record/file easily in public sector/institutions you conduct procurement audit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION B. Auditors Competency

<table>
<thead>
<tr>
<th>No</th>
<th>state your agreement or disagreement to the following statements</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>Experienced auditors are participated in auditing process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>There is professional communication between management and auditors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Auditors are aware of various principles of risk assessment and appraisal as well as risk management in procurement process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Auditors have evaluation skill in procurement specification and bill of quantity of procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Auditors have a knowledge about public procurement process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Auditors possess the ability to relate the organizations risk appetite to the application of controls in operational areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>There is knowledge on procurement process analysis tools and techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Auditors are proficient in problem-solving techniques and use of tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Statements</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>----</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>9</td>
<td>Auditors are proficient in data collection and analysis tools and techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Auditors are proficient in techniques on control assessment and risk analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Auditors are proficient in data mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Auditors are proficient in continuous/real-time auditing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION-C. INDEPENDENCE**

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The problem of rectify audit findings timely depended the performance of procurement auditing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The value of procurement auditing depends heavily on the independence of auditors in mind and appearance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Top management protects auditor’s independence when undertaking audit duties.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Auditors are sufficiently immune from any internal pressure to undertake audits and are report findings and recommendations objectively without fear of reprisal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Your organization does permit auditors to audit operations which they have undertaken</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Auditors are segregated from functional and management decisions (e.g. as heads of operational working groups in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
administrative reform projects;

7 Chief Audit Executive (CAE) has adequate powers in establishing audit plans

8 auditors are adequately graded and remunerated according to their roles and responsibilities

9 Auditor has free and unrestricted access to all operations, personnel, assets and transaction records

### SECTION-D- Resource constraint

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In your organization audit work budget not properly allocated</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>In your organization audit work budget is not release timely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>audit work salary and benefit paid is not enough to encourage auditors to perform auditing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>time is not properly allocated for conduct procurement audit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>In your organization there is lack of enough staff to carry out auditing function.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>On procurement audit engagement there is no sufficient resource like vehicles, computer, laptop, paper, printer, telephone and others are available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION-E- Effectiveness of procurement Auditing

| No | Variables                                                                                                                                                                                                 | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------|---------|----------|------------------|                  |
| 1  | The occurrence of fraud and corruption reduced in public sector procurement                                                                                                                                |                |       |         |          |                  |                  |
| 2  | In public procurement transparency and non-discriminatory enhanced from time to time                                                                                                                     |                |       |         |          |                  |                  |
| 3  | The procurement auditing in public sector achieves its goal                                                                                                                                                |                |       |         |          |                  |                  |
| 4  | There is timeliness in issuing audit reports                                                                                                                                                              |                |       |         |          |                  |                  |
| 5  | There is high efficiency based on number of hours spent and coverage in audit activities                                                                                                                  |                |       |         |          |                  |                  |
| 6  | There is timeliness in the undertaking of satisfaction surveys                                                                                                                                              |                |       |         |          |                  |                  |

NB: You are kindly requested to return back the questionnaire to the person assigned as soon as possible upon completion.

**Interview Questions**

1. PPA is established with the aim to over sight and audit federal public procurement procedures as well as to build the capacity of public bodies regarding to procurement procedures in order to improve the procurement function in terms of achieving procurement principles and to reduce malpractices public procurement. In your opinion is this objective achieved or not and please shares your opinion in relation to public procurement auditing.

2. How do you get the competency of auditors who participated in public procurement auditing?

In your opinion what are the limitation of auditors that you observed?. In your own opinion how overcome the competence limitation of the auditors?

3. In your organization what resource are challenging procurement auditing?

In your opinion how do you overcome the problems?

**THANK YOU VERY MUCH!**