

DETERMINANTS OF INTERNAL AUDIT EFFECTIVENESS IN THE PUBLIC SECTOR, CASE STUDY IN SELECTED ETHIOPIAN PUBLIC SECTOR OFFICES

A RESEARCH PAPER SUBMITTED TO THE POST GRADUATE OFFICE IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE MASTERS DEGREE OF SCIENCE IN ACCOUNTING AND FINANCE (MSC.)

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JUNE, 2014

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DECLARATION

I undersigned declare that this research report is my original work and has not been presented for a degree in any other university, and all the materials used for this study have been duly acknowledged.

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Abstract

The main purpose of this study is to investigate on the determinants of internal audit effectiveness in the selected Ethiopian public sector offices. This investigation is focused on 15 purposely selected public sector offices that are expected to represent all other sectors. The management teams and the internal auditors of the selected public sector office are the source for the required data to the researcher through the questionnaires administered. In addition, the finding of this study is to show the direct relation effects of management perception, management support, organizational independence of internal auditors, adequate and competent internal auditor's staff and the presence of approved internal audit charter with the internal audit effectiveness on the public sector management. According to the regression output the management support, the existence of adequate and competent IA staff, and the availability of approved IA charter were contributed for the internal audit effectiveness in the public sector significantly and positively. The remaining two variable; the managements perception for the IA value and the organizational independent of internal auditors were positively related with the IAE but their contribution for the IAE were statistically not significance. All of these five independent variables are making 55.10% of the contributions for internal audit effectiveness in the public sector offices. The public sector offices should understand that the contributions of these variables were collectively significant to identify any noncompliance activities in their office and to add values for the IAE in the public sector offices.

Key Words: *Internal Audit; Ethiopian Public sector offices; internal audit effectiveness; determinants of internal audit effectiveness;*

Acknowledgement

First of all, I would like to thank my almighty God for his great support to accomplish this research work and for his infinite support in my entire life success. Secondly, I would like to express my genuine thanks to Dr. Sujatha Selvaraj and Mr. Mohammed S. for their continuous comment and supports to make this research paper and for the information given that is very valuable for my study. And also I would like to thank Jimma University College of Business and Economics research and post graduate coordinating office for the chance given to and direct to make this research paper based on the topics that I select.

Finally I would like to thank all the people who support me by giving different materials and for their idea sharing to complete this study, particularly my big boss Engineer Genene Haile EEPCo Project manager, my brother Hailemeskel H/Mariam, my wife Mesi Wub, my kid Aregawi Shewamene, and also my collaborators WA, TT, ZY, BT, SG and all my best friends who are highly supported me to proceed this study.

Shewamene Hailemaria

June, 2014

Jimma, Ethiopia

Table of content

Contents	Page
DECLARATION.....	i
Abstract	iii
Acknowledgement.....	iv
Table of content.....	v
List of tables	viii
Acronyms	ix
CHAPTER ONE.....	1
1. INTRODUCTION	1
1.1. Background of the Study.....	1
1.2 Statement of the Problem	3
1.3 Objective of the Study.....	5
1.3.1 General Objective	5
1.3.2 Specific Objective.....	5
1.4 Research Questions	5
1.5 Research Hypothesis	6
1.6 Significance of the Study	6
1.7 Scope and limitation of the Study	7
1.8 Organization of the Study.....	7
CHAPTER TWO.....	8
2. RELATED LITERATURE REVIEW	8
2.1 Introduction	8
2.2 Theoretical Review.....	9
2.2.1 Internal Audit and Related Literature	9

- 2.2.2 Types of Audits Performed by Internal Auditors 11
- 2.2.3 Internal Audit Effectiveness 12
- 2.3 Empirical Review 13
- 2.3.1 Management Support..... 14
- 2.3.2 Management’s Perception of IA’s Value 15
- 2.3.3 Organizational Independence 16
- 2.3.4 Adequate and competent Internal Audit Staff..... 17
- 2.3.5 The Approved Internal Audit Charter..... 19
- 2.4 Summery 20
- CHAPTER THREE 21
- 3. Research Design and Methodology 21
- 3.1. Introduction 21
- 3.2. Research Design 21
- 3.3. Sampling Techniques 21
- 3.4. Sample size..... 22
- 3.5. Data Collection Instrument 23
- 3.6. Variables used in the Research..... 24
- 3.6.1. Dependent Variable 24
- 3.6.2. Independent Variable..... 25
- 3.7. Data Analysis Method 25
- 3.8. Model Specification 26
- CHAPTER FOUR 27
- 4. Research Findings: Analysis and Discussion..... 27
- 4.1. NTRODUCTION 27
- 4.2. Descriptive Statistics 27

- 4.2.1 Response Rate..... 27
- 4.2.2 Respondents Profile..... 27
- 4.2.3 Internal Auditors Response..... 29
- 4.3. Reliability Analysis 31
- 4.4. Assessment of Ordinary Least Square Assumptions..... 31
 - 4.4.1. Assessment of Normality..... 31
 - 4.4.2. Assessment of Heteroskedasticity 32
 - 4.4.3. Assessment of Multicollinearity 32
 - 4.4.4. Assessment of Autocorrelation..... 34
- 4.5. The Regression Results and Hypothesis Testing 34
 - 4.5.1. Regression Results for IAE 35
 - 4.5.2. Hypothesis Test 36
- CHAPTER FIVE..... 42
- 5. Conclusion and Recommendation 42
 - 5.1. Summary of Major Finding..... 42
 - 5.2. Conclusion..... 43
 - 5.3. Recommendations 44
- Reference..... 46
- Appendix A: Questionnaires 50
- Appendix B: Reliability Statistics for Variables 58
- Appendix C: Assessment of OLS Assumptions for the Model..... 59
- Appendix D: The Regression Results for IAE 61
- Appendix E. Frequency Table..... 62

List of tables

Tables	Page
Table 4.1 Respondents general Profile.....	28
Table 4.2 Internal Auditors Response	29
Table 4.3 Reliability Statistics.....	31
Table 4.4 Test of Normality	32
Table 4.5 Test of Heteroskedasticity	32
Table 4.6 Collinearity Statistics	33
Table 4.7 Pearson Correlations Matrix.....	33
Table 4.8 Regression result for IAE.....	35

Acronyms

- **3Es** Effective, Efficient and Economical
- **IA** Internal Auditors
- **MoFED** Ministry of finance and Economic Development
- **IIA** Institute of internal auditors
- **OAG** Office of the Audit General
- **SAP** Statement on Auditing Practice
- **CFIA** Competency Framework for Internal Auditing
- **MS** Management Support
- **MP** Management perception
- **OIN** Organizational Independence
- **ACIAS** Adequate and Competent Internal Audit Staff
- **AIAC** Approved Internal Audit Charter
- **IAE** Internal Audit Effectiveness
- **SPSS** Statistical Package for Social Science
- **CFIA** Competency Framework for Internal Auditing
- **OLS** Ordinary Least Square

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

In Every country that is administered in a democratic policy needs to be accountable in its use of public money and in providing effective, efficient and economical (3e's) service delivery. To achieve those government objectives applying internal audit function were the major mechanism for controlling and using of all scarce resources available in the corporate organization. Ever more larger and complex systems require greater competitiveness, thus internal audit has had to become ever more professional (Cecilia Nordin Van Gansberghe, 2003).

In addition, the development in internal audit profession brings change in the scope and functions of internal audit customers. Previously internal auditors were seen just as an assistant of accountant's and an external auditor but recently internal audit is certainly is considered an independent profession, which is playing a significant role in the management of organizations. Besides, independent of internal auditors have always been a sensitive issue while he/she is the employees of the organization, above all, not clearly organized structure or reporting line make the problem more complicated in such offices (Rolandas Rupsye, 2005).

Public sector offices are part of the public body which is partly or wholly financed by government budget and concerned with providing basic government services to the whole society (Ministry of Finance and Economic Development (MoFED), 2004). The compositions of the public sectors are varied by their function and purposes, but in most cases, they are designed in order to enable the public sectors to achieve their goals.

The public sector provide services such as banking service, financing, education, communication service, healthcare, police, transportation, electric services, security and so on, which benefit all of the society and encourage equal opportunity to benefit from those services provided (Mihret and Yismaw, 2007). This research was focused on the determinants of Internal Audit Effectiveness in the selected Public sector office found in Addis Ababa mainly federal government offices. Mostly, the efficiency and effectiveness of the management operations in public sector are ensured by the effectiveness of its employees.

Internal auditors which are the focus of this study and also the key employee of public offices, are expected to work independently and objectively to enhance high quality of public services, achieve good internal control system, avoid corruption, ensure good corporate governance system, promote accountability and greater transparency (Coram et al, 2008; Van Peurse 2005; Belay, 2007).

Therefore, it is important to have effective internal audit unit as part of modern governance system in public sector offices. In corporate governance internal audit (IA) issue has received increasing attention in recent years, due to different reasons. To mention some of them, internal audit links to the internal control-risk management system; improve organizational efficiency and effectiveness through providing constructive criticism and recommendations about organizations status; reduce information asymmetry during decision making; serves as an important internal assurance in the business and financial reporting process of corporations (Soh and Bennie, 2011; Cohen and Sayag, 2010; Mihret and Yismaw, 2007).

Additionally, in the accounting profession, audits play an important role in serving the public interest by increasing the accountability of managers and reinforcing trust and confidence in financial reporting process and they serve as an important link in the business and financial reporting process of corporations and not for profit providers at organizational level (Reynolds, 2009). In connection with this, internal audit identifies weak links in the system as well as creates potential opportunities for improvement and act as a feedback mechanism for the top management. Hence, organizations seeking a suitable and effective quality management system need to conduct internal audits to ensure that the system functions as intended (Lindow and Race, 2002).

Moreover, the new Institute of Internal Audit's (IIA, 2001), board of directors defined internal audit as:

An independent, objective assurance and consulting activity designed to add and improve an organization's operations. It helps an organization to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

These definitions give us a broad clue about importance and contribution of internal audit functions in the organizations. For example, internal auditing is involved in consulting activities, and value added contributions for the evaluation and improvement of the effectiveness of risk management and governance process (IIA, 2001). This shows the roles of internal auditing is moving away from the narrow scope of measuring and evaluating the effectiveness of internal controls towards a broader scope of activities that creates opportunities for the internal auditing profession and to receive more attention in corporate governances.

Even though, the internal auditors have many roles and contributions to the organization and the public interest, it also faces many challenges from the organization they work. Some of the challenges identified by the Ministry of Finance and Economic Development (2004), in their internal audit manual are lack of management respect, lack of independence, assigned of internal auditors to many tasks and being ignored (conflict of interest) and lack of professional development.

In addition, Mihret and Yismaw, (2007) in their case study on Ethiopian public Universities, they argue that internal audit recommendations are not afforded enough management attention and support which adversely affect the effectiveness of internal audit. Moreover, lack of mechanisms in place to follow up the implementation of internal audit recommendations; absence of strategic plan and consistent documentation styles for audit work, lack of resources, poor leadership for internal audit function (IAF), absence of appropriate framework to measure IAF performance, and lack of competent personnel are also some challenges of internal auditors (Mihret and Yismaw, 2007; belay, 2007).

1.2 Statement of the Problem

Internal auditors have the right and ability to access all information in every part of the organization and their function lies at every activities of the corporate governance system. All the stakeholders will therefore benefit from having a strong Internal Audit Function (IAF) which will provide value to the other cornerstones of corporate governance (Smet and Mention, 2011). Because internal auditors can make line managers aware of their responsibility; can act as a consultant in monitoring risk, identifies weakness in internal control system, and facilitates the implementation of risk management as well as IA contributes to the appropriateness of procedures and operations of the audited body (Cohen and Sayag, 2010; Arena and Azzone, 2009; Dittenhofer, 2001).

The internal audit staffs are organized inefficiently with low technical staff proficiency, that does not prepared a strategic plans to conduct their activities to produce effective internal audit output to their organization(Cohen & Sayag, 2010; Arena and Azzone, 2009; Mihret and Yismaw, 2007). Besides this the audit evidences are attached with their annual reports; but due to their limited access for readability, limited distribution to the senior management officers and low level of follow-up for the implementation of audit recommendations to apply effective internal audit, the overall responses by the management to the IA findings and recommendations is generally not adequate in universities which are part of the public sector. Moreover, the number of actual audit performed in a period is usually less than the number of audits stated in the annual audit plan is not supporting the effectiveness of the internal auditors in the organization (Mihret and Yismaw, 2007).

The area that looked in this research focus on the effectiveness of internal auditors; measuring in terms of internal auditor's ability in identifying non-compliance activities and the added contributions by IA to the Ethiopian public sector offices which are an important concept to show the influential out puts of the internal auditors. This would have far-reaching implications on the level of IA's effectiveness and competency. Because the percentage of recommendations suggested by the internal auditors are actually implemented by the auditee offices; and the ability to plan, execute and communicate audit findings are the most suitable dimensions to evaluate internal audit effectiveness (Cohen & Sayag, 2010; Arena and Azzone, 2009; Mihret and Yismaw, 2007).

With regard to this, the researcher is attempting to identify the factors influencing internal auditor's effectiveness in the public sector offices. Specifically, how management's perception of IA's value, management support, organizational independence, adequate competent internal audit staff, and approved IA charter influence the effectiveness of internal audit in the public offices are examine and answered.

1.3 Objective of the Study

1.3.1 General Objective

The general purpose of this study is to investigate the determinants of internal audit effectiveness in the selected public sector offices.

1.3.2 Specific Objective

Specifically, the researcher tried to achieve the following objectives;

- To examine the contributions of management support for IAE in the public sector offices.
- To examine the contributions of management perception for IAE in the public sector offices.
- To examine the contributions of organizational independence of internal auditors for IAE in the public sector offices.
- To examine the contributions of adequate and competent internal auditors staff for IAE in the public sector offices.
- To examine the contributions of approved internal audit charter for IAE in the public sector offices.

1.4 Research Questions

The research has proposed to answer the following research questions;

- Does the support given by the management to internal auditors enhance the IA effectiveness?
- Does the management perception matter for internal audit effectiveness?
- Does organizational independence of internal auditors affect IA effectiveness?
- Does the adequate and competent internal audit staff impacts on IA effectiveness?
- Does the presence of approved internal audit charter in the public sector offices contribute to the internal audit effectiveness?

1.5 Research Hypothesis

After reviewing the related literatures (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone) specifically the relations of management perception, management support, organizational independence of internal auditors, adequate and competent internal audit staff, and the presence of internal audit charter with internal audit effectiveness the study are designed the following directional hypothesis.

H1: The management supports are positively related to the internal audit effectiveness in the public sector offices.

H2: The better the management's perceptions of internal audit values, the higher internal auditors' ability in identifying noncompliance activities and the more added contributions.

H3: The organizational independence for internal auditors positively related to the internal audit effectiveness in the public offices.

H4: The presence of adequate and competent IA staff in the public sector offices are positively related to the internal audit effectiveness.

H5: The availability of approved IA charter in the public sector offices have positive and significant impact with the internal audit effectiveness in the public sector offices.

1.6 Significance of the Study

The internal auditors have a significant impact to control any non-compliance activity in line with the established policies, plans, procedures, laws and regulations, set by the government which could have a significant impact on the organization's operations. The internal auditors are also essential to add or create value to the organizations, to avoid failure and to save the operating and administration costs in accordance with the organization's policies and procedures.

Therefore, this research is very essential to show the effectiveness of the internal auditors by assessing the factors which determines the public sectors internal audit effectiveness. In addition this research is important for the empirical evidences for the public sector offices to examine their

policies and procedures, and for the future researchers also important to develop a conceptual literature development.

1.7 Scope and limitation of the Study

The study, focus on the determinants of internal audit effectiveness would more successful if it is conducted in all public sector offices, and also on all privately owned organizations. But due to time and financial constraints it is out of the touch of the individual researcher, and due to this the public sector offices which are cover under this research work are limited to 15 purposively selected public sectors which are expected to show the effects of all the rest untouched offices. In addition the intent of this study is to investigate the selected determinants of the IA effectiveness; such as management perception, management support, organizational independence, adequate competent internal audit staff and presence of internal audit charter in the selected public sector offices.

1.8 Organization of the Study

In addition to the preliminary page, this research paper consists of five chapters. The first chapter with its sub topics was introductory parts incorporated the introduction, statement of the problem, research objectives, research questions, research hypotheses, significant of conducting the study, scope and limitation of the study, and the methodologies used to conduct this study. The second chapter describes the detail review of related literatures with regard to the internal audit effectiveness and the variables which affect the internal audit effectiveness. The third chapter expresses the information regarding the sampling techniques used to conduct the research. The fourth chapter is the analysis, discussions and presentation part of the research findings and finally, the last chapter describe about the conclusions and recommendations of the case study followed by the references and appendixes.

CHAPTER TWO

2. RELATED LITERATURE REVIEW

2.1 Introduction

Organizations have encountered rapid changes in economic complexity, expanded regulatory requirements, and technological advancements in recent years. In addition to these changes the current corporate scandals and the global financial crisis also pushed the public and regulatory bodies to give unique position to internal audit in corporate governances for internal assurance services (Soh and Bennie, 2011). These changes have given the IA a set of expanded opportunities to support and advice management; evaluate risk exposures relating to the organizations governance, operations and information systems, identify internal control system efficiency and effectiveness, provide services to other organizational functions; and generate direct reporting links to the audit committee and shareholders; safeguarding of assets; and compliance with laws, regulations, and contracts (IIA, 2001; MoFED, 2004).

The Ethiopian ministry of finance first issues the audit directive in 1942, by focusing mainly on the public sector utilization of funds, and it marked on the modernization of audit practice in the country. By following this, the Office of the Audit General (O.A.G) is formulated in 1961 with the necessary modifications with respect to the duties and responsibilities of the bureaus and the auditors; and in 1987 and on wards there are significant developments in public sector auditing systems in the country).

Moreover, the coming of Proclamation No. 13/1987 empowered the O.A.G to direct the internal auditors of government offices and public enterprises in three aspects that are whether accounting records are properly maintained and reliable, whether the assets of the ministries and enterprises are adequately safeguarded and properly maintained; and whether policies and procedures laid down by top management are complied with that implies less attention was given to operational audit as a service to management(Kinfu, 1990; Lemma Argaw, 2000).

The public sector offices are the major vehicle for economic development due to their engagement in various economic activities; such as in manufacturing industry, transport and communication services, banking and financial service sectors, construction sector, hotel and tourism industry, etc. To become efficient and effective in each economic activity the performance of the management should regularly measure and assessed to take corrective actions when bad performance is found. Accordingly, the management of the public offices is responsible to follow up the implementation of economic policy and procedure, and submit reports on the performance of the economy (MoFED, 2004). Therefore, the effectiveness of IA should receive the greater attention in research area to enhance the quality of its report. In line with this, the research had focused on the determinants of IA effectiveness in selected public sector offices.

Nevertheless, Internal Audit is subject to many problems that affect internal auditors' effectiveness in different corporate governance (Cohen & Sayag, 2010; Arena &Azzone, 2009; Belay, 2007; Mihret & Yismaw, 2007). Particularly the determinants of internal audit effectiveness which are used to measure the improvement of public sectors through IA were the focus of this case study. In this case study the literature review consists of the definition of internal audit and the term effectiveness, the type of auditing activities performed by the internal auditors and the internal audit effectiveness instrument of improving public sector management such as the perceptions of the management, management support, organizational independence of internal auditors, adequate and competent of IA staff and the presence of approved IA charter by referring different books, reviewing and analyzing prior audit researches and journals.

2.2 Theoretical Review

2.2.1 Internal Audit and Related Literature

A simple and more traditional meaning of internal auditing is defined as: an independent appraisal function established within an organization to examine and evaluate its activities as a service to the organization.

Later on, the new Institute of Internal Audit (IIA, 2001), defined internal audit as:

An independent, objective assurance and consulting activity designed to add and improve an organization's operations. It helps an organization to accomplish its objectives by bringing a

systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

According to this definition the major scope of the internal auditors are making assurance to the organization and giving consultant services to the overall managements of the corporate governance. By providing the independent opinion and conclusions regarding the operation, function, system and wellbeing of the organization the IA can provide assurance services; and by giving the advisory service based on the specified requests of an engagement client the internal auditor can give the consulting service to the organization.

Internal audit are the mechanism through which information about the effectiveness of the quality system is gathered by auditors selected from within the company but, who are independence of the area, function or procedures being audited. Or the Internal Audit Function (IAF) is the mechanism through which the operation of the quality management system is formally monitored and in accordance with the documented quality system is assured (MoFED, 2004).

The Statement on Auditing Practice (SAP-6) of the Institute of Chartered Accountants of India describes internal audit as “the plan of organization and all the methods and procedures adopted by the management of an entity to assist in achieving management’s objective of insuring, as far as possible, the orderly and efficient conduct of its business, including adherence to management policies, the safeguarding of assets, prevention and detection of fraud and error, the accuracy and completeness of accounting records and timely preparation of reliable financial information.

On the other hand, internal audit is a critical appraisal of functioning of various operations of an enterprise including the functioning of the system of internal check. Exceptions from normal functioning of internal check system are exposed in internal audit. Accuracy, completeness, reliability and timeliness of accounting information are tested and reported for remedial action. Non-accounting areas with the operational side of enterprise are critically studied, analyzed and weakness of the system or practice with inefficiency, wastage and frauds are brought to the notice of the management. Suggestions for increasing the effectiveness of the system, for improving the productivity and profitability of business practices are offered. Internal audit is the independent appraisal of activity within an organization for the review of accounting, financial and other business practices as a protective and constructive arm of management. It is a type of control which functions

by measuring and evaluating the effectiveness of other types of control (B.N. Tandon 14th edition, p. 112-115).

Professor Walter B. Meigs of America says internal auditing consists of a continuous, critical review of financial and operating activities by a staff of auditors functioning as full time salaried employees. Internal audit implies an audit of the accounts by the employees of the business. The work is done by a separate set of staff that may or may not have professional audit qualifications. The function of an internal auditor is practically the same as that of an auditor. In addition to that an internal audit has to see that there is no wastage and the business is carried on efficiently and effectively. Again if an internal auditor finds that as a result of the inefficiency of the management, the management the concern has suffered a loss, it is his duty to report the fact. The IA has to be reported to the management whether the policy and plans of activities prescribed by them have been implemented, whether the internal controls and checks established were adequate, whether the actual results obtained were varying from the estimates, etc. to enable the management to achieve the objective of the company in the planned manner.

2.2.2 Types of Audits Performed by Internal Auditors

A variety of audits are performed in the review of campus programs and resources. These audits include:

Operations Audits: These audits examine the use of resources to determine if resources are being used in the most effective and efficient manner to fulfill the organization's mission and objectives.

Financial Audits: These audits review accounting and financial transactions to determine if commitments, authorizations, and receipt and disbursement of funds are properly and accurately recorded and reported. This type of audit also determines if there are sufficient controls over cash and other assets and that adequate process controls exist over the acquisition and use of existing resources.

Compliance Audits: These audits determine if entities are complying with applicable laws, regulations, policies and procedures. Examples include federal and state laws, and Trustee policies and regulations.

Information Systems Audits: These audits review the internal control environment of automated information processing systems and how people use these systems. The audits usually evaluate system input, output; processing controls; backup and recovery plans; system security; and computer facilities.

Internal Control Reviews: These audits focus on the components of the major business activities, such as payroll and benefits, cash handling, inventory and equipment, physical security, grants and contracts, and financial reporting.

2.2.3 Internal Audit Effectiveness

Different authors were defined the term “effectiveness” as follows; for instance, Arena and Azzone (2009) defined effectiveness as “the capacity to obtain results that are consistent with targets”. Dittenhofer (2001) “Effectiveness is the achievement of internal auditing goals and objectives using the factor measures provided for determining such factors”. In Mihret and Yismaw, (2007) internal audit effectiveness is defined as “the extent to which an internal audit office meets its supposed objective or the extent to which it meets the intended outcome”.

All the three authors defined effectiveness in terms of achieving the IA goals and objectives, though interpreted in different ways. Mihret and Yismaw (2007) described the characteristics of effective internal audit unit from the internal audit point of view. Effective Internal Audit (IA):

- Undertakes an independent evaluation of financial and operating systems and procedures;
- Contributes to the achievement of organizational goals;
- Needs management’s commitment to implement recommendations;
- Provides useful recommendations for improvements as necessary;
- Affected negatively by lack of attention from management which in turn adversely affects the auditee attributes; and
- Management support is a natural quid pro quo for effective internal audit.

While; Sarens and Beelde (2006) point out the contribution and roles of internal audit in organizations or corporate governance from the senior management's expectation point of view. Senior management expects internal audit:

- To compensate for management's loss of control resulting from increased organizational complexity,
- To be the safeguard of corporate culture through personal contacts with people in the field,
- To be a supportive functions in the monitoring and improvement of the risk management and internal control system,
- To be laid a training ground for future managers, and
- To collaborate actively with the external auditors to increase total audit coverage.

This indicates that internal audit and management is the interdependent unit that should be collaborated to achieve organizational goals. While doing their activities, there is some value that internal audit unit seeks from management (such as management support, commitment, expectation, etc.) and that the management wants from the internal audit like adding value in decision making by providing sufficient information and reducing information asymmetry, monitoring and improvement of the risk management and internal control system.

2.3 Empirical Review

As the main aim of this research is to assess the effectiveness of internal audit in the public business sector enterprise, different authors and researcher's idea and recommendations regarding the related topic of internal audit are analyzed and presented. Although the prologue of internal audit in Ethiopia are dated in the 1940s the time also the united states and most European countries are adapted; the effectiveness of internal audit in the public sector are challenged because of the factors that hinder the development of IA in Ethiopia. For the ease of presenting the literature those studies regarding the main determinants/factors/ that influence the effectiveness of internal audit in the public business enterprise sector; such as the perceptions of the management, management support, organizational independence of internal auditors, adequate competent of IA staff and the presence of IA charter reviewed from different researchers are included in these literature.

2.3.1 Management Support

Internal auditors have a close relationship with organization's management in their day to day activities. They need good support and perception from their management to be more effective and to achieve the audit objectives. Management support is expressed in terms of supporting the auditing process by fulfilling the necessary resources, finance, transport if required, providing training, introducing auditors with new technology and procedures, budgeting funds for certification and other facilities that facilitate the internal auditing works.

Management support has a far-reaching consequence on IA effectiveness in organizations. For example, Mihret and Yismaw (2007) in their case study of IA effectiveness on public sector shows that the component of management support consists of the response to audit finding and the commitment to strength internal audit which has significance influence on IA effectiveness.

Given the fact that internal audit activities are performed in dynamic management process and more supportive environment, internal auditor expects senior management to take the first steps to support the IA process. Because, Sarens and Beelde (2006) argue that the overall acceptance and appreciation of IA within the company is strongly dependent upon the support they receive from senior management. Internal audit actively seeks management support with resources, commitment to promote and communicate their added value.

The management support is almost crucial to the operation and internal audit; because all other determinants of IA effectiveness derive from the support of top management, given that hiring proficient IA staff, developing career channels for IA staff, and providing organizational independence for IA work are the results of decisions made by top management (Cohen & Sayag, 2010). This means it is the interest of management to maintain a strong internal audit department (Adams, 1994; Mihret and Yismaw, 2007).

In addition implementation of audit recommendations is highly relevant to IA effectiveness (Sarens and Beelde, 2006; van Gansberghe, 2005) which is the component of management support (Mihret and Yismaw, 2007). The management of an organization is viewed as the customer receiving IA services. As a result, management's commitment to use audit recommendations and its support in strengthening internal audit is vital to IA effectiveness.

Therefore, audit finding and recommendations would not serve much purposely unless management is committed to implement them. Furthermore, Belay, (2007) find that to curb corruption and inefficiency in the public sector of Ethiopia, it is mandatory to have effective internal audit function (IAF) that in turn needs appropriate governance structure, mobilizing sufficient and appropriate resource and competent personnel.

2.3.2 Management's Perception of IA's Value

Perception is the process of attaining awareness or understanding of sensory information or it is the mental image or intuitive recognition of experience when aware of the elements of the environment (Woodard III, 2002). To function effectively, internal auditors and the customers of audit services should possess a similar understanding of what makes internal auditing a value added activity. The failure to reach this understanding could result in the perception that internal audit is simply an obstacle to achieving production objectives. This can result in underutilized audit services and ignored audit recommendations (Flesher and Zanzig, 2000) which adversely influence the effectiveness of IA (Arena and Azzone, 2009).

When employees at all levels perceive that the top management assigns importance to the function of IA, they will cooperate and support these processes (Cohen & Sayag, 2010). This implies that internal audit staffs are more motivated and encouraged to perform audit activities given good management's awareness of IA values. Sarens and Beelde (2006) used a case study approach of five Belgian firms to explore the expectations and perception of both senior management and internal auditors with respect to the relationship between these two parties. They find that, when internal audit operates primarily in a management support role, there is a lack of perceived objectivity and the relationship the audit committee is weak. However, senior management's expectations significantly influence internal audit and that the perception of senior management is critical to the acceptance and appreciation, to promote value added and to the maturity of internal audit function with the organization.

2.3.3 Organizational Independence

Independence has no single meaning and interpretation across the people; hence the concept is subject to ambiguity and uncertainty (Wines, 2012). However, for the purpose of the case study independent refers to the concept of being free from any management influence while internal auditors perform audit activities and issue audit report (Ahmad & Taylor, 2009; Belay, 2007; MoFED, 2004). Independence is fundamental to the reliability of auditor's reports. Those reports would not be credible, and investors and creditors would have little confidence in them, if auditors were not independent both in fact and appearance. The assurance services provided by auditors derive their value and credibility from the fundamental assumptions of independence of mind and independence in appearance (Wines, 2012; Stewart and Subramanian, 2010).

While the internal audit typically the whole management process, to maintain objectivity, to increase the reliability of information, to be free from unacceptable risk of material bias, and to issue reasonable and credible audit opinion, it is required to be independent (IIA,2001). However, due to an often strong direct or indirect relationship between IA and the Chief Executive Officer (CEO) and/or chief Finance Officer (CFO), it is reasonable to expect that senior management is in a position to exert a significance influence over IA (Sarens and Beelde, 2006; Van Peurse, 2005).

Independence in fact exists when auditors are actually able to act with objectivity, integrity, impartiality and free from any conflict of interest. While the concept of independence in appearance is the auditor should be perceived by others (the public or other third party) to be independent. In this case, conflict of interest will also exist when a reasonable person, with full knowledge of all relevant facts and circumstances, would conclude that the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body.

Auditors should be sufficiently independent from those they are required to audit in order to conduct their work without interference. Coupled with objectivity, organizational independence contributes to the accuracy of the auditor's work and gives employers confidence that they can rely on the results and the reports (Cohen & Sayag, 2010). However, Hellman N. (2011) suggested that CFOs seek to influence audit planning, particularly with regard to internal controls and the selection and scope of entities subject to audit; and this in return impairs the independence of internal auditors.

In order to maintain their independence internal auditor's organizational status and position is also critical which is related to management perception. This is because it enables them to exercise their tasks independently and act objectively. As Stewart and Subramaniam (2010) review under organizational status the IAF should be given the appropriate status in the organization to enable the function to exercise organizational independence and individual internal auditors to act objectively since internal auditors found in a unique position as employees of an organization with responsibility to assess and monitor decisions made by management and also to the management.

Furthermore, many auditors have been argued that in order to achieve audit objectives and become effective organizational independence is very important. For instance, the independence of internal audit department and the level of authority to which the internal audit staff report are the important criteria influencing the objectivity of its work, and added that organizational independence is more crucial to the effectiveness of the internal auditors, as it protects the auditor from pressure or intimidation, and increases the objectivity of the auditing work (Cohen & Sayag, 2010; Van Peurse, 2005; Boa- Read, 2000).

2.3.4 Adequate and competent Internal Audit Staff

Adequate staffing is essential for a system to its full capability. Weakness in staffing can lead to mismanagement, error and abuse, which can negate the effect of other controls (MoFED, 2004). The size of IA staff and the competency of internal audit are the critical characteristics of IA quality that can't be separated. This means at the absence of one dimension the other cannot contribute to the quality of internal auditors.

The empirical findings by Al-Twaijry et al. (2004), based on questionnaire and interview responses from internal and external auditors, working in Saudi Arabia, suggests that the external auditors believes that IAF size is an important indicator of its quality. In addition, large size of IA staff has many benefits for internal operations of IA unit. For instant, larger sized functional units, there will be more opportunity and flexibility to have a staff rotation schedule that can also influence IA effectiveness by promoting a more healthy relationship and resulting in more objective audit investigations. Furthermore, Zain et al. (2006) argue that a larger size internal audit is likely to be better resourced, including having a broader work scope, higher organizational status and wider staff talent than a smaller unit. Likewise, the quality of IA work is likely to be higher in internal audit

units with a larger proportion of staff with audit experience than those with a lower proportion of audit experience.

Appropriate staffing of an internal audit department and good management of that staff are keys to the effective operation of an internal audit. An audit requires a professional staff that collectively has the necessary education, training, experience and professional qualifications to conduct the full range of audits required by its mandate (Al-Twaijry et al, 2004). Auditors must comply with minimum continuing education requirements and professional standards published by their relevant professional organizations (IIA, 2001).

The IIA's standard 1210, on proficiency of the auditor require that the internal auditors should possess the knowledge, skill and other competencies need to perform their responsibilities (IIA, 2001). Additionally, the critical dimensions of IAF is the quality of its internal auditing staff measured in terms of internal auditors skill (Seol et al, 2011; Leung and Cooper, 2009; Seol and Sarkis, 2006). As part of this, Competency Framework for Internal Auditing (CFIA) focuses on the skills needed by an individual person to be an efficient internal auditor.

The literature review specifically conducted on the communication skills (Smith, 2005) stated that the development of effective communication skills (such as listening, interpersonal, written and oral communication skills) is an important part of internal auditor's advancement potential. Internal auditors must possess highly developed communication level skills to become a successful professional. The development of these skills is not only enhances the auditor's potential, but will also improve the quality of audits produced.

In addition to the above dimension of IA quality, the competence of internal auditors can be measured in terms of academic level, experience and the efforts of staff for continuous professional development and compliance with audit standards. Both the quantity of audit effort and the quality of professional care exercised will determine the overall quality of the internal audit work (Cohen & Sayag, 2010; Leung and Cooper, 2009; Belay 2007). Arena and Azzone, (2009) also stated that IA effectiveness increase in particular when the ratio between the number of skilled internal auditors and employees grows. This shows that sufficiently large number of skilled professionals enables the IA to do its duties.

2.3.5 The Approved Internal Audit Charter

Internal audit charter is defined by the IIA as “a formal written document that defines the activity’s purpose, authority and responsibility. The charter should be (a) establish the internal audit activity’s position within the organization; (b) authorize access to records, personnel and physical properties relevant to the performance of managements; and (c) defined the scope of internal audit activities” (IIA, 2001). Additionally, an internal audit charter typically includes the responsibilities of the IA in broad terms, the standards followed by the IA; and the relationship between the IA and the audit committee.

It may also defines access to the information (documents, records, systems, and personnel) necessary to perform and reach conclusions on the work, and it is a vehicle for asserting that there are no unreasonable limitations on the scope of the auditor work. The charter should clearly identify and record any limitations and alter to actual or potential changes on internal and external conditions that affect its ability to provide internal control assurance from a forward looking perspective (O. Regan, 2002).

Different authors have been explained the presence of defined audit charter in organizations will helps auditors to be effective. For instance, O. Regan (2002) concludes that a well drafted charter is an important ingredient for the IA effectiveness. It helps to direct the efforts of audit staff and defines what the board can expect on the assurance it required on internal control from an IA. Van Peurseem (2005) added that the presence of a strong charter adds an official and respected layer of authority to the position of IA in the company. It is also an important feature of insuring success in achieving the independent status of an IA. Furthermore, the existence of audit charter in organization influences senior management to flow the recommendations of the internal auditor (Van Peurseem, 2005) which in turn affects IA effectiveness.

2.4 Summery

Despite increasing attention to the IA's role within corporate governance, only limited researchers have been examined the determinants of effectiveness of its function. A number of these studies were IA related and organizational characteristics to the effectiveness of its function. For example, similar understanding of IA as value adding activity by management and its customer will increase the possibility of regular utilization of IA services and recommendations, that in turn related with IA effectiveness (Flesher and Zanzig, 2000; Arena and Azzone, 2009). In assessing the organizational delivers of IA effectiveness added that the size of internal auditors team and the involvement of audit committee in internal auditors activities are positively related with internal audit effectiveness (Arena and Azzone, 2009).

The advantage of having IA function within the organization was increasing the likelihood of detecting and self-reporting fraud than outsourcing functions. Nevertheless, the possibility of realizing these advantages is determined by different organizational characteristics (Coram *et al*, 2008). As Cohen and Sayag (2010) find top management support was strongly and consistently related to the three internal audit dimensions such as auditing quality, auditee evaluations and the added contributions. In addition, they stated that the greater the organizational independence increases positive internal auditee evaluation. Furthermore, the size of internal auditors staff, skills and experience of internal auditors, continues professional development and academic level are the best indicators of internal audit quality (Arena and Azzone, 2009; Cohen and Sayag, 2010; Al-Twajjry *et al.*, 2004).

Finally, a well-defined internal audit charter will helps internal auditors to be effective and contributes to achieve the attempt of ensuring independent status of internal auditors (Van Peursem, 2005; O'Regan, 2002). The current research was investigated the determinants of internal audit effectiveness in the public sector offices based on the management support, the managements perception of internal auditors value, organizational independence, existence of adequate and competent internal auditors staff, and the presence of approved internal audit charter.

CHAPTER THREE

3. Research Design and Methodology

3.1. Introduction

An important part of the research activity is to develop an effective research design which shows the logical link between the data collected, the analysis and conclusions to be drawn. This design satisfies the most suitable methods of investigation, the nature of the research instruments, the sampling plan and the types of data (De Wet, 1997). In this section the research design, sampling type, research instrument, the dependent and independent variables applied throughout the research, and finally the model specifications used for data analysis which are applicable and use in the study are included.

3.2. Research Design

The study is expected to investigate on the determinants of internal audit effectiveness in the selected public sector offices. The data used to conduct this study are the primary data obtained through the questionnaires. The questionnaires were distributed both to the organizations senior management team and for their internal auditors. The study areas are selected using purposive sampling method from the federal level public sector offices which have greater impact to influence the country's overall economy.

3.3. Sampling Techniques

The target populations for this research were the federal public sector offices which are found in Addis Ababa city of the Ethiopian federal government. In Ethiopia there are around 72 public sectors, while most of them have internal audit staff but some public sectors haven't internal audit staffs, (Ethiopian legal Brief, 2013). Due to the difficulty of covering all the total existing public sector, the researcher obliged to minimize its study area by focusing only on 15 purposively selected public sector offices that are expected to be used as a representative of other sectors.

These sector offices are selected purposively, because the use of purposive sampling enables the researcher to generate meaningful insights that help to gain a deeper understanding of the research phenomena by selecting the most informative participants that is satisfactory to its specific needs.

Therefore, the researcher focused on these public sectors which have enough internal audit staffs, very popular in nature and have greater impact to influence the country's overall social, political and economic issues.

The selected public sectors and related public sector offices are as follows:

- Commercial Bank of Ethiopia, Development Bank of Ethiopia, Construction and Business Bank of Ethiopia from the banking and finance sectors; Ethiopian Airports Enterprise, Ethiopian Postal Service Enterprises, Ethiopian Shipping and Logistics Service Enterprise, Ethiopian Commodity Exchange, Agricultural mechanization service enterprises the enterprise sector and also from the Corporations; Ethio Telecom, Ethiopian Electric Power Corporation, Metal and Engineering Corporations, Ethiopian Sugar Corporation, Ethiopian Insurance Corporation, Ethiopian Road Construction Corporation and Ethiopian Railway Corporations are the focus of this case study

The data collection was conducted based on a survey from the selected public sector offices that have internal audit team in their offices. The public sector offices that don't have internal audit function are excluded from the study. From each public sector office the management members; chief executive officers (CEO), chief finance officer (CFO) and their respective deputy senior managers who have been used the audit result are participated for the responses distributed. The internal auditors of those purposively selected public sector offices having more professional certification and experienced auditors also participated for the questionnaires administer.

3.4. Sample size

From the researcher's preliminary study the total number of public sectors are around 72 offices which were classified into three strata based on their services rendered to the public, and by dividing it into different homogeneous substratum the researcher focused on fifteen public sector offices. The questionnaires are distributed for these selected public sector offices to get appropriate responses.

To obtain the adequate responses through questionnaire the researcher believes that distributing the questionnaire for four senior managers; those are the chief executive officers and chief finance officers with their respective deputy managers (who are the stepping stone to other positions) in total sixty respondents who use the audit result are appropriate.

And also, to get adequate response from the public sectors internal audit staffs regarding the factors affecting the effectiveness of internal audit in the public sector taking four experienced internal auditors (because most of the public sector offices have four IA) from each sector and total sixty respondents are believed appropriate to make analysis regarding the effectiveness of IA in the selected public sector offices. Even if the use of proportional sampling is appropriate in order to obtain a representative sample from each strata; because of the samples selected from the population have not equally selected /not equally important/ the use of purposive sampling is more essential to obtain a typical and representative of the whole universe (Kothari, 2004).

3.5. Data Collection Instrument

The primary data were used to accomplish the study, and to collect the data from the respondents included in the sample questionnaires were distributed. The questionnaires were distributed to the managers and the internal auditors of the public sector office. But, the questions are different for the managers and the IA according to their profession and responsibility. The questionnaire for the manager deals about the effectiveness of the offices internal auditing process, while the questionnaires for the internal auditors are about the independent variables which determine the effectiveness of internal auditors.

The questionnaires was adopted and modified from the prior author and literature review (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone, 2009), an approach which is recommended in methodological literature for studies of this nature (Bryman and Bell, 2007) and those questionnaires are prepared in the form of Likert-Scale type (showing respondents agreement or disagreement) by constructing into five point scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932). The questionnaires distributed to the respondent are organized in to two parts; the first part comprises the demographic question regarding the respondents, and the second part contains items relating to the effectiveness of IA and its determinants.

3.6. Variables used in the Research

3.6.1. Dependent Variable

The dependent variable for this research is the internal audit effectiveness. In here the internal audit effectiveness are measured in terms of internal auditors' ability to identify non-compliance activities with the offices procedures and policies, and the contributions added by IA to the public offices. Compliance audit is a type of audit service that mostly performed by internal auditors of the organization (Fadzil, F.H *et al*, 2005). Compliance is defined as 'adhering to the requirements of laws, industry and organizational standards and codes, principles of good governance and accepted community and ethical standards'. Compliance also involves ascertaining the extent of compliance with established policies, plans, procedures, laws and regulations, which could have a significant impact on the organization's operations (Fadzil, F.H *et al*, 2005; MoFED, 2004). Therefore, IA is responsible to regularly assess and verify internal operations conformance with organization's policies and procedures, and then issue compliance report to the concerned body (MoFED, 2004). The added contribution by IA to organizations can be measure in terms of value creation (e.g. its role in the avoidance of corporate failures) and cost saving (Soh and Bennie, 2011; Cohen & Sayag, 2010).

In this case study the researcher was measured the IA effectiveness by implementing the internal audit effectiveness of the public sector offices with the country's auditing environment in which the internal auditor's ability in identifying non-compliance activities and the added contribution by the IA to the public offices. Compliance audit is the most audit services implemented in Ethiopian public bodies (Mihret and Woldeyohanes, 2008; MoFED, 2004) while the added contributions by the IA to organization was used by Cohen and Sayag (2010) to measure the IA effectiveness. Therefore, both dimensions were measured IA effectiveness against the perception of public offices managers (CEO and CFO).

To understand the level of the manager's perception of IA effectiveness a 5-scale point Likert-type of 15 different item questionnaires were constructed and distributed to the respondents. The researcher have been used the summative score technique for the questions in each factor for each participant. This is because Likert scale is the common summative scores (Balnaves and Caputi, 2001).

3.6.2. Independent Variable

This study was focused on five independent variables that might have an impact on the internal audit effectiveness in the public sector offices. Those predicted variables investigated in this research are: the managements support for the IA activity, the management's perception of IA's value, organizational independence of the IA work, the adequate and competent internal audit staff and the presence of approved internal audit charter. It should be noted that the data for the independent variables were collected from the internal auditors of the selected public sector offices. Therefore, the independent variables represent the perceptions of the internal auditors regarding these concepts. Similarly with the dependent variable items, all of the independent variables items were measured on a five point Likert-scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932).

As shown in Appendix A of part II, twenty four different item questionnaires were constructed to identified each of the independent variables of the management support, the management's perception, organizational independence and the availability of adequate and competent internal audit staff, and four items were constructed for the presence of approved internal audit charter; and the internal auditors were asked to express their opinion for those items.

3.7. Data Analysis Method

Data analyses are conducted through a descriptive statistics to provide details regarding the demographic question and the various factors that affect the effectiveness of IA in the public sector. To evaluate the effects of various factors on the effectiveness internal auditors in the public sector the correlation analysis were used.

And also, the Statistical Package for Social Sciences (SPSS) version 20 and Excel were used for the data analysis. In order to assess the reliability and consistency of the instrument the Cronbach's Alpha (α) analysis was conducted. Whereas, to determine the relationship among the variables and to test the research hypothesis correlation and regression analysis method are used by meeting the ordinary least square (OLS) assumptions of the linear regression.

3.8. Model Specification

The following model is formulated for this research in order to test the research hypothesis set earlier. Most of the independent variables included in the model are extensively used in prior audit researchers (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone) except the management perception of IA's value and the adopted internal audit charter. So the reliability and validity of the model was recognized and used in this research is to analyze and interpret the result of the study.

$$IAE = \alpha + \beta_1 MS + \beta_2 MP + \beta_3 OIN + \beta_4 ACIAS + \beta_5 AIAC + e_i$$

Where:

IAE → the effectiveness of internal auditors' in identifying non-compliance activities and the added contributions of IA to the public sector offices,

MS → The Managements Support,

MP → The management's perception of IA's value,

OIN → The organizational independence,

ACIAS → The adequate and competent internal audit staff,

AIAC → The existence of approved internal audit charter.

α → is a constant, represents the effectiveness of IA when every independent variables are zero.

β_{1-5} → is the coefficient, in which every marginal change in variables on internal auditor's effectiveness affects correspondingly.

e_i → the error term

CHAPTER FOUR

4. Research Findings: Analysis and Discussion

4.1. INTRODUCTION

As indicated in the previous chapter, the main attempt of this study is to investigate the determinants of internal audit effectiveness in the public sector. Therefore, this chapter presents the analysis and discussions for research findings obtained from the questionnaires. It reports the investigation results obtained from senior managers and internal auditors of the public sector offices covered in the questionnaire. The discussion begins with the questionnaires' response rate followed by the descriptive statistics of the respondents related questions; like the gender, age, profession, and level of education. The results of the reliability analysis and the regression assumption test also reported and finally the results of hypothesis testing are presented.

4.2. Descriptive Statistics

4.2.1 Response Rate

The questionnaires were distributed to both the senior managers and the internal auditors of the selected federal level public sector offices. For these, 120 questionnaires are distributed both to the senior managers and internal auditors and from which 112 questionnaires were collected (56 responses each from managers and internal auditors) giving the response rate of 93.33%. This shows good response rate both for the managers and internal auditors

4.2.2 Respondents Profile

The table given below describes the general findings regarding the respondents age, sex, field of study and level of education for both the senior managers and the internal auditors. The respondents from the senior managers 36 (64%) were males and 20 (36%) were females, while from the internal auditors category 41 (73) were males and 15 (27) were females. Here in both categories the shares of males are higher than females but in proportion the gaps are higher in the internal auditor's category.

The majority of the ages of respondents of the managers are fall under the age of 40-49 (23, 41%), 30-39 (20, 36%), and the rest falls in the age interval of 50–59 (8, 14%) and 20-29 (5, 9%); and in the internal auditors category the majority are fall in the age of 30-39 (20, 36%) and 40-49 (19,34%) and the rest falls in the age of 50-59 (12, 21%) and 20-29 (5, 9%) respondents. Here, the majority of the respondents are in the age of 30-50 (82, 73%) years, but unfortunately there were no respondents who are aged above 60 years.

Table 4.1 Respondents general Profile

Demographic Questions		Responses			
		Managers		Internal Auditors	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	36	64	41	73
	Female	20	36	15	27
	Total	56	100	56	100
Age	20 – 29	5	9	5	9
	30 – 39	20	36	20	36
	40 –49	23	41	19	34
	50 – 59	8	14	12	21
	Total	56	100.00	56	100.00
Field of Study	Accounting	24	43	41	73
	Management	27	48	10	18
	Economics	3	5	5	9
	Other	2	4	-	-
	Total	56	100	56	100
Educational level	Diploma	-	-	2	4
	Bachelor’s Degree	44	79	41	73
	Master’s Degree	12	21	13	23
	Total	56	100	56	100

Source: Questionnaire Results, 2014

In the case of field of study the respondents were composed of from Accounting (24, 43%), Management (27, 48%), Economics (3, 5%), and others fields (2, 4%) for managers, while the IA's were composed of from Accounting (41, 73%), Management (10, 18%) and economics (5, 9%) fields. Here, the majority of managers and internal auditors were studied management and accounting fields respectively which shows the good assignment of professionals for their appropriate job.

In terms of the level of educational background, most managers and internal auditors have bachelor's degree (44, 79%) and (41, 73%) respectively followed by master's degree (12, 21%) for managers and (13, 23%) for internal auditors. Only 2 (4%) respondents from IA have diploma and there were no managers who had diploma. But from both categories there were no respondents who had other level of educations. These shows the majorities of the respondents were educated/or professional and can contribute more for the effectiveness of their intended work.

4.2.3 Internal Auditors Response

The internal auditors, who are the main participants in the internal audit effectiveness were requested separately to response the questionnaires regarding their professional certification, experiences working as IA and the presence of audit committee in their sector office. Table 4.2 below shows the descriptive statistics of these internal auditors' responses for the delivered questionnaires.

Table 4.2 Internal Auditors Response

Questions		Responses	
		Frequency	Percentage
Professional certification	Certified Internal Auditor (CIA)	25	45
	Certified Public Accountant (CPA)	4	7
	Certified Management Accountant (CMA)	3	5
	Other certification	3	5
	Note Certified	21	38
	Total	56	100
Experiences working as IA	Below five years	6	11
	5 to 10 years	23	41

	11 to 15 years	16	29
	16 to 20 years	5	9
	Above 20 years	6	11
	Total	56	100
The presence of audit committee	Yes	40	71
	No	16	29
	Total	56	100

Source: Questionnaire Results, 2014

As indicating in table 4.2 above the professional certification of the internal auditor; 25 (45%) Certified Internal Auditors (CIA), four (7%) Certified Public Accountants (CPA), three (5%) have Certified Management Accountants (CMA) and also the other three (5%) are with other certifications and the remaining 21 (38%) respondents had no professional certification of auditing.

The internal auditors work experience ranges from one year up to 25 years, but the majority of the respondents are in the range of 5-10 years (23, 41%) and 11-15 (16, 29%) years of work experience followed by participants having less than five years and above twenty years of work experience both are numbered six (11%) and participants having work experience of 16-20 years are five (9%). Here the majority of the IA are well experienced and can perform their auditing activities by using their past audit experiences.

In terms of the present of Audit Committee, about ten (n = 40, 71%) public sector offices had audit committees and four (n= 16, 29%) public sector offices had no audit committees in their office. The availability of audit committee in the public sector have the benefits of monitoring and controlling the internal audit activities and objectives, ensuring the independence, reviewing the internal audit program, ensuring the adequacy of the scope of internal audit activities and monitoring managements actions in terms of financial , risk management and internal control (MOFED, 2004).

4.3. Reliability Analysis

To measure the consistency of the questionnaire particularly the Likert-type scale the reliability analysis is essential in reflecting the overall reliability of constructs that it is measuring. To carry out the reliability analysis, Cronbach's Alpha (α) is the most common measure of scale reliability and a value greater than 0.700 is very acceptable (Field, 2009; Cohen and Sayag, 2010) and according to Cronbach's (1951), a reliability value (α) greater than 0.600 is also acceptable.

Table 4.3 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.684	.713	6

Sources: survey data, 2014 SPSS output

From table 4.3 above, the value for Cronbach's Alpha (α) was 0.684 for all variables. When these calculated reliability values are close to 0.7000, and compared with the minimum value of alpha 0.600 advocated by Cronbach's (1951), then the responses generated for all of the variables' used in this research were reliable enough for data analysis.

4.4. Assessment of Ordinary Least Square Assumptions

4.4.1. Assessment of Normality

In order to test the normality of data, Kolmogorov-Smirnova and Shapiro-Wilk tests of normality were used and conducted on SPSS 20. According to Field (2009), when the test is non-significant ($p > 0.05$) it shows that the distribution of the sample is not significantly different from a normal distribution. Accordingly, the result of test showed in table 4.4 below and Appendix C that all variables were found to be normal and the presence of normality was accepted at $p > 0.05$.

Table 4.4 Test of Normality

Variables	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Internal Audit Effectiveness	.108	56	.298*	.962	56	.112
Management Support	.095	56	.185*	.971	56	.247
Management Perceptions	.125	56	.050	.965	56	.140
Organizational independence	.127	56	.072	.920	56	.102
Adequate and Competent IA Staff	.108	56	.200*	.962	56	.224
Approved IA Charter	.124	56	.194*	.939	56	.213

a. Lilliefors Significance Correction *. This is a lower bound of the true significance.

Source: Survey data, 2014 SPSS output

4.4.2. Assessment of Heteroskedasticity

For the regression output of the model Breusch-Pagan/Cook-Weisberg test for Heteroskedasticity was conducted on stata 12 to test for homogeneity of variance and a P-value of greater than 0.05 were acceptable. As the result revealed in table 4.5 below and Appendix C, p value (= 0.7894) for the model is greater than 0.05 the critical value, shows homogeneity of variance across the model.

Table 4.5 Test of Heteroskedasticity

. estat hettest
Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity
Ho: Constant variance
Variables: fitted values of IAE
chi ² = 0.1800
Prob > chi ² = 0.7894

Source: Survey data, 2014 Stata output

4.4.3. Assessment of Multicollinearity

Multicollinearity exists when there are strong correlations among the predictors and the existence of r value greater than 0.80, tolerance value below 0.10 and Variance Inflation factor (VIF) greater than

10 in the correlation matrix are the causes for the multicollinearity existence (Field, 2009; Myers, 1990; Pallant, 2007). Tolerance is a statistics used to indicate the variability of the specified independent variable that is not explained by the other independent variables in the model.

Table 4.6 Collinearity Statistics

Variables	Collinearity Statistics	
	Tolerance	VIF
Management Support	.604	1.655
Management Perceptions	.826	1.211
Organizational independence	.805	1.242
Adequate and Competent IA Staff	.721	1.387
Approved IA Charter	.890	1.124

Source: Survey data, 2014 SPSS output

As shown in the Collinearity table, the tolerance levels for all variables are greater than 0.10 and the VIF value are less than 10 (see table 4.6 below), and also the correlation matrix of all the variables have the paired values among the predictors are less than 0.80 (see table 4.7 below) indicates that there were no multicollinearity problems that alters the analysis of the findings, rather it leads to the acceptance of r value, tolerance and VIF values.

Table 4.7 Pearson Correlations Matrix

Variables	IAE	MS	MP	OIN	ACIAS	AIAC
Internal Audit Effectiveness	1.000					
Management Support	.399**	1.000				
Management Perceptions	.216	.354**	1.000			
Organizational Independence	.179	.429**	.220	1.000		
Adequate and Competent IA Staff	.575**	.492**	.343**	.262*	1.000	
Approved IA Charter	.402**	.311**	.184	.200	.126	1.000

** . Correlation is significant at the 0.01 level (1-tailed). * . Correlation is significant at the 0.05 level (1-tailed).

Source: Survey data, 2014 SPSS output

Table 4.7 above depicts the correlation between the independent variables and also with the dependent variables. The result shows the acceptable reliability of the research variables in which, the correlation among predictors were not high indicates there are no Multicollinearity problems among variables. As of the relationships between the dependent variables (IAE) and independent variables (MS, MP, OIN, ACIAS and AIAC), some findings are significant.

Furthermore, there were strong correlations between the dependent variable internal audit effectiveness (IAE) and independent variables MS ($r = 0.399$), ACIAS ($r = 0.575$) and AIAC ($r = 0.402$) with ($P < 0.01$) level of significant, shows a strong support for first, fourth and fifth hypothesis respectively. However, there were no significant correlations among the MP and OIN with internal audit effectiveness thereby leading to reject the second and third hypotheses. The correlation analysis was utilized to reject or accept research hypothesis in previous audit research in addition to the regression analysis (Cohen and Sayag, 2010).

4.4.4. Assessment of Autocorrelation

Data were assessed to ensure that the autocorrelation is not a threat for the use of OLS for analysis. This assumption can be tested with the Durbin-Watson test which test for serial correlation between errors and the value closer to 2 are acceptable (Field, 2009). As described on appendix D and table 4.6 below, the Durbin-Watson statistics value are 1.952 very close to 2 suggests that there is no severe autocorrelation among error terms.

4.5. The Regression Results and Hypothesis Testing

The regression result that are obtained by regressing the internal auditors effectiveness in identifying noncompliance activities and the internal auditors ability in adding value for their organization on the managements support (MS), managements perception (MP), organizational independence (OIN), adequate and competent internal audit staff (ACIAS) and the existence of approved internal audit charter (AIAC) were analyze and reported. Finally, the hypothesis tests were undertaken based on the proposed hypothesis and the regression output results.

4.5.1. Regression Results for IAE

The regression result explores the necessary indicators of the internal audit effectiveness by using the variables identified in the model. As indicated in the model summary (table 4.8) the appropriate indicators of the variable used to identify the IAE were explored. That is, the value of R square used to identify how much of the variance in the dependent variable (IAE) identify by the model. The larger the value of R square, the better the model is.

The overall contribution of managements support, management’s perception, organizational independence, adequate and competent internal audit staff and the existence of approved internal audit charter to the IAE accounted for 55% ($R^2 = 0.551$) of the variation in the IAE, the rest 45% are other variables not included in this study.

Table 4.8 Regression result for IAE

R = 0.743 $R^2 = 0.551$ Adj. $R^2 = 0.507$ Std. Error of the Estimate = 2.7287							
Durbin-Watson (d) = 1.952			F = 12.292		P = .000		
Variables	Unstandardized Coefficients		Standardized Coefficients	t-value	Sign.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	29.676	5.984		4.959	.000		
MS	1.705	.202	.424	3.481	.001**	.604	1.651
MP	.047	.168	.029	.282	0.779	.826	1.211
OIN	.135	.164	.087	.825	0.413	.805	1.242
ACIAS	1.196	.191	.698	6.257	.000**	.721	1.387
AIAC	1.155	.298	.423	4.208	.000**	.890	1.124

**P < 0.01, 95% level of Confidence, N = 56

Source: Survey data, 2014 SPSS output

Moreover, the model summary also shows the significance of the model by the value of F-statistics (P = .000) and F = 12.292 which implies that there were strong relationship between the predictors and the outcomes of the regression variables and are at best fit the model to predict the effectiveness of internal audits in the public sector. The beta (β) sign also shows the +ve or -ve effect of the

independent variables coefficient over the independent variable. And as shown in table 4.8 above, beta sign of all the independent variables shows the positive effect of the predicting dependent variable. That means, any increase in the independent variables lead to increase in the dependent variable internal audit effectiveness. This finding is consistent with most of the previous studies that are identified in this paper (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone, 2009; Al-Twaijry et al. 2004).

Therefore, based on the coefficients of the dependent variable (β sign) all the hypotheses proposed by the researcher are acceptable because of all the five hypotheses stated the positively relationship with the dependent variable are meet. But based on the statistical significances of the independent variable over the dependent variable at 5% level of significance, only three independent variables (MS, ACIAS and AIAC) are significantly contributed for the IAE at ($P < 0.01$) level of confidence.

Thus, this implies the MS, ACIAS and AIAC are the most important determinants of IAE in which the public sector office should give more emphasis in their IA function. Besides this, even if their relationships are positive the remaining two independent variables (MP and OIN) have not significant contribution for the predicted dependent variable (IAE) because they have a sig. value of greater than 5%. The variable with the level of significance (sig) value less than 5% could make a significance unique contribution to the predicted value of the dependent variable, beyond this level of sig. the variable are not making a significance contribution for the prediction of the dependent variable (Pallant, 2007; Somekh and Lewinn, 2005).

4.5.2. Hypothesis Test

The regression analysis whose results are presented in table 4.8 above and appendix D provides a more comprehensive and accurate examination of the research hypothesis. Therefore, the regression results obtained from the model were utilized to test these hypotheses. The hypotheses sought to test for a significant influence of management support (MS), management perceptions (MP), organizational independence (OIN), adequate and competent internal audit staff (ACIAS) and the existence of approved internal audit charter (AIAC) on the direct effect of internal audit effectiveness which was measure in terms of internal auditors ability to identify the noncompliance activities and by their added contributions to the public sector.

As can be seen in table 4.8 above the p value for the MS, ACIAS and AIAC are statistically significant at ($p < 0.01$) which suggests a strong support for hypothesis 1, 4 and 5; whereas, MP and OIN are not supported the developed hypothesis (hypothesis 2 and 3) because it was statistically insignificant at ($p < 0.05$).

The following hypotheses test were conducted based on the regression results of the internal audit effectiveness obtained from the regression output.

H1: The management supports are positively related to the internal audit effectiveness in the public sector offices.

The first hypothesis of this research posted that the effectiveness of the internal audit is directly related with the extent of the management support it receives. Showing the strongly correlated relationship between the IAE and the management support, the positive beta sign and a statistically significant result of management support related with the internal audit effectiveness ($\beta = 1.705$, $t = 3.841$, $P < 0.01$) support the proposed hypothesis acceptable. The management support in terms of providing resources, giving trainings, introducing with new technologies, providing enough facilities and encourages the internal audit process with commitments to promote and communicate their added value for the effectiveness of internal audit work in their office contributes for the IAE.

The result were consistent with the previous auditing research works of (Mihret and Yismaw, 2007; Cohen and Sayag, 2010) they find that the top management support was the critical determinants of internal audit effectiveness in audit finding and the commitment to strength internal audit through hiring proficient internal audit staff, developing career channels for internal audit staff, and providing internal audit work independence. Similarly, in this research finding the managements support in terms of trainings, resources and through other necessary facilities to the internal auditors the top management can contribute to the effectiveness of internal audit works for their office.

Therefore, the management can contribute for the effective result of the internal auditors through their support in terms of continuous training for their IA staff, fulfilling the necessary materials and facilities that the IA staff needs; and this in turn strongly supports the first proposed hypothesis (H1).

H2: The better the management perceptions of internal audit values, the higher internal auditors' ability in identifying noncompliance activities and the more added contributions.

The second hypothesis of this research revealed that there were the direct relationship between the management's perception and the effectiveness of IA in the way of identifying noncompliance activities and the ability of IA to add value to the IAE. This hypothesis were not supported by the regression result as of the regression results insignificant related with the IAE at ($P < 0.05$). As shown in table 4.8 above the coefficient of MP ($\beta = 0.047$) were positively related but statistically ($t = .282, \rho > 0.05$) not significant related with the internal auditors effectiveness by identifying noncompliance activities and in adding more values to the IA works of the public sector offices.

Therefore, the managements perception of internal auditors values, results in statistically insignificant contribution for the internal auditors ability in identifying the noncompliance activities and their added contribution to the end objective of effective internal audit activities in their office. Even if this variable have a coefficient of positively related with the effectiveness of internal auditors as a result of its insignificant regression analysis output result leads not to support he proposed hypothesis (H2).

But this hypothesis needs a caution; in that insignificance of the management's perception in determining the IA effectiveness didn't mean that it doesn't completely contribute to the effectiveness of IA. This result may be happened due to the management's support and the available of adequate and competent IA staff highly contributed for the IAE in the public sector offices. This makes the contribution of the MP to the IAE insignificance.

Therefore, the spirit of good perception of the management to the effectiveness of internal audit function in identifying the noncompliance activities and their ability to add value to their office were nothing without the appropriate management support to the internal audit functions and without the existence of adequate and approved IA staffs in the office. Furthermore, the supports from the management and the availability of the adequate and competent IA staff may overshadow in the determinants of the management's perception for the internal auditor's value.

H3: The organizational independence for internal auditors positively related to the internal audit effectiveness in the public offices.

The third hypothesis of this research which is assumed to be the determinants of IA effectiveness is the independence of the organization in which internal audit work were conducted. As shown in table 4.8 above the coefficient of OIN ($\beta = .135$, $t = .825$) were positively related with the effectiveness of IA. But, because of its statistical result ($P > 0.05$) the regression output result haven't statistically significant relationship between the organizational independence and the IA effectiveness reveals not to support the third hypothesis.

Whereas, it is inconsistent with the previous studies conducted by (Cohen, & Sayag, 2010; Van Peurse, 2005) they find that, the more organizational independence to the internal auditors plays the vital role in assurance of internal audit effectiveness by freely access of necessary documents, information and data about the organization for audit work, and can provide audit finding /report/ freely and directly to the responsible body, and this all supports the IA effectiveness in their sector.

This may be occurred due to the organizations support to the IA effectiveness and accordingly, the level of independence, reporting level, direct contact to the board and senior management, conflict of interest, interference, the unrestricted access to all departments and employees, appointment and removal of the head of internal audit, and performing non-audit activity may not be equally perceived. But, without the relevant senior management support simply the independence of the organization to the internal auditors may not be enough to add value and to identify the noncompliance activities performed in their office.

Therefore, the existence of adequate and competent IA staff and the availability of AIAC in their office in line with the appropriate management support for internal auditor's activity are strong enough to make effective the internal audit function in the public sector. And this in turn leads to make the result of OIN for the IAE insignificant contribution and not to support the proposed hypothesis (H3).

H4: The presence of adequate and competent IA staff in the public sector offices are positively related to the internal audit effectiveness.

The existence of adequate and competent internal audit staff also supposed to be the determinants of internal audit effectiveness and is the fourth hypothesis of this research. The regression result highly supports this hypothesis at ($P < 0.01$) level of significant and with the positive signs of beta and t-statistics ($\beta = 1.196$ and $t = 6.257$). But, this result was inconsistency with some previous auditing researches (Arena and Azzone, 2009; Cohen and Sayag, 2010) they argued that there were no correlation between professional proficiency and adequacy with the IA effectiveness.

But the previous research was conducted in terms of the number of internal auditors, professional certification and level of education, whereas this research was conducted the effects of IA by considering the overall abilities of the internal auditor staffs and the availability of adequate and certified internal auditors in terms of their performance to proceed the required auditing activities by matching with the audit standards and organizational objectives by using modern technologies when compared to those previous studies.

Therefore, the existence of adequate and competent IA staff in the public sector office results with positively relationship with IAE and with high contribution for the IAE by performing their activities on time, cover the planed scope of auditing activities by using the computerized data tools and specific IA software. This results with the overall contribution of internal audit effectiveness and its positive relationship with IAE leads to highly support the proposed hypothesis (H4).

H5: The availability of approved IA charter in the public sector offices have positive and significant impact on the internal audit effectiveness in the public sector offices.

The last hypothesis which is proposed to support the effectiveness of internal audit is the existence of approved internal audit charter in the public sector office. A well drafted IA charter is a crucial ingredient for the successful internal auditing functions. The regression output result also supports this hypothesis with significantly correlated variables with the level of significance ($p < .01$) and the positively related coefficients ($\beta = 1.255$ and $t = 4.208$) contributes for the internal audit effectiveness. This indicates the significant impacts of AIAC to increase the ability of internal auditors to identify the noncompliance activities and the more contribution to the public sector.

In addition, the result of this hypothesis was consistent with the prior audit researches conducted by (Peurseem, 2005; O'Regan, 2002). According to the authors a well drafted IA charter helps the internal audit function to perform its roles of management influence objectively and used as a way of getting access to the information (documents, records, systems, and personnel) that are necessary to perform and reach conclusions on the work. The MoFED (2004) also directs all the public sectors to have approved IA charters that are used as a working manual.

Therefore, the existence of approved internal audit charter in the public sector office contributes for the effectiveness of internal audit works by facilitating the activities of internal auditors and to make their purpose and authority in line with the standards for the professional practices formulated by the institute of internal auditors in accordance to the rules and regulations of the organization. This strongly supports the proposed hypothesis of the positively related relationship between the availability of AIAC and its significant impact for the internal audit effectiveness (H5).

CHAPTER FIVE

5. Conclusion and Recommendation

5.1. Summary of Major Finding

According to the regression output all these predictors were positively contributed for the effectiveness of internal audit functions in Ethiopian public sector offices. Therefore, the public sector office should give emphasis to use these determinant variables to make their service delivery effective, efficient and economical throughout their offices. Moreover the management support, the existence of adequate and competence internal auditor's staff and the availability of approved internal audit charter were the major determinants of IAE in the public sector. However, the managements perceptions for IA value and the organizational independent of IA were not significantly important for the IAE of public sectors as of the above three variables.

This study finds that the composite measure of management support, managements perception of IA values, organizational independence of internal auditors, the existence of adequate and competent IA staff, and the availability of approved internal audit charter accounts for 55.10% ($R^2 = 0.551$) variance for the IA effectiveness in identifying noncompliance activities and added contributions to the public sector offices. That means, the impact of these five independent variables contributed for the dependent variable IAE were 55.10%, and the remaining 44.90% were other variables that are not included in this study.

The final portion of this research aims to conclude the finding of the study focusing on the core determinants that have significant impacts to the internal audit effectiveness and to provide recommendations based on the research findings of the study. These conclusions and recommendations are drawn from the findings of the study specifically related to the managements support given to the IA activities, the management's perception for the IA values, the organizational independence of the IA, the existence of adequate and competence IA staff, and the availability approved IA charters in the public sector offices.

5.2. Conclusion

Due to its important role it plays for the overall management system internal audit is the major mechanism to ensure sound corporate governance. The existences of effective internal audit in the office links with internal control risk management system, improves organizational efficiency and effectiveness, reduce information asymmetry during decision making, and ensures internal reliability of financial reporting process. By taking this aspect into consideration, this study was identified factors that determine the IA effectiveness in the public sector offices and then analyzed the organizational dimensions in which the public sector office should carry out to enhance the IA effectiveness. And also by testing of the proposed hypotheses showed relations of these independent variables with the IAE the following conclusions were drawn.

- The IAE of the public sector office increases, when there were more supports from the management, have adequate and competent internal auditors staff in the office combined with the availability of approved IA charters. The regression analysis (shown on table 4.8) shows very strong contributions of these variables for the IAE. Therefore, the overall effect of the management support, the existence of adequate and approved IA staff, and the availability of approved IA charter in the public sector is very important for the IAE in the public sector offices without neglecting the other two statistically insignificant variables (MP and OIN), because they have a positive sign of beta and contribute for the 55.10% of the variances for the IAE. Thus, neglecting these two variables may cause to decrease the value of IAE variance that was obtained from collective contribution of the five independent variables.
- In addition, the correlation analysis (shown on table 4.7) shows all the independent variables have the direct effect of the internal audit effectiveness (IAE) and the regression result also depicts all the independent variables have a positive sign of coefficients (shown on table 4.8) with IAE in the public sector offices. However, the management's perception to the IA value and the organizational independence of IA were statistically not significant enough at 5% sig. level to contribute for the IAE in the public sector offices, therefore this conclusion requires future research should consider for obtaining the impact of these variables on the IA effectiveness.

- Furthermore, the correlation analysis (see table 4.7) showed the contributions of the independent variables to the internal audit effectiveness. For instance, the management's perception of IA value and the organizational independence of internal auditors were not significantly correlated with internal audit effectiveness to the public sector offices. This conclusion requires future research should consider the impact of these determinants on internal audit effectiveness.

5.3. Recommendations

After watching the research findings and achieved results with regard to the main objective of this study to identify the major determinants of IAE in the public sector offices and also to prove the hypotheses, the researcher provides the following recommendations to the public sector offices, the internal auditors, the MoFED and the educational institutions.

- The finding of this research proved that the management support, the existence of adequate and competent IA staff, and the availability of approved IA charter were statistically significant and positively related with the IAE in the public sector offices. Thus, the public sector office should support more for the internal audit functions by facilitating the IA works, should recruited more adequate and competent IA staff and give sufficient training and professional certification for the existing IA staffs, and should maintain the approved IA charter and workable manuals for their office because it directs the overall activities of the internal auditors in line with IIA standards and the office policies and guidelines.
- The internal auditors of the public sector office should recommended to maintain and improve their effective contribution for the IAE in their office, by using the supports from their offices management team appropriately, by improving their professional certification in line with the institute of internal audit standards and organizational guidelines and by introducing themselves with modern technologies that improve their IA function for their office.
- As the research proved that the existence of approved IA charter, and adequate and competent IA staffs were the major determinants of IAE in the public sector, the MoFED were recommended to design, provide and continually evaluated the internal audit charters for each public sector office; and also the MoFED recommended to support the internal audit works by increasing the number of certified internal auditors by funding the certification fees and also by facilitating the way for certification.

- The internal audit staffs of the public sector also recommended to work in accordance with the available internal audit charters, it helps the internal auditors to provide the appropriate reports and to know the extent of their relationships with the managements, briefly describes their rights and duties IA and the employers.
- Finally; the Ethiopian higher educational institution should contribute for the IAE by working in collaboration with the MoFED and other public sector offices to accomplish effective internal audit work by supplying the adequate and competent internal audit staffs and also to give short term trainings to upgrade the existing IA staffs proficiency in line with the institute of IA standards.

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Appendix A: Questionnaires



Jimma University

College of Business and Economics

School of Graduate Studies

Department of Accounting and Finance

Dear Participant:

The intent of this questionnaire is to explore information regarding the determinants of Internal Audit (IA) effectiveness and to conduct Master Thesis (Research) for the partial fulfillment of Masters Degree in accounting and finance at Jimma University. The questionnaires are distributed to the federal level public sector offices that found in Addis Ababa city. The results of the study are expected to contribute to identify the determinants of internal audit effectiveness.

The conclusions of the study will be drawn in aggregate terms, without any reference to specific office or individual respondents. Please, do not write your name on the questionnaire.

I would also like to assure you that the information you provided will be treated as strictly confidential and used only for the purpose of this research only.

Your honest and thoughtful response is valuable

Thank you in advance for your support and participation.

With best regards,

Shewamene Hailemariam, Mobile: +251- 913 05 72 94, Email: Shewameneh@yahoo.com

I. Questionnaire Administered to Managers

Objective of the Questionnaire

Effective internal audit function is an important management tool to monitor and direct the internal operations of an organization effectively and appropriately. Therefore, the purpose of this research is to assess and identify factors that affect the effectiveness of internal audit which will be measured in terms of internal auditors' ability in identifying non-compliance activities and the added contribution by internal audit to the sector in different public business enterprises.

In line with this, you are kindly requested to give your response to your personal profile, and to each statement related with **the internal auditors' ability in identifying non-compliance activities in your sector and the added contribution by internal audit to your sector** as provided in the table below.

A. The personal profiles

General Instruction: Please indicate your choice by putting “√” mark in the bracket.

1. Sex/Gender/: Male (_____) Female (_____)
2. Age (in year): 20 to 29(____), 30 to 39(____), 40 to 49(____), 50 to 59(____), above 60 (____)
3. Your field of study: Accounting (_____), Management (_____), Economics (_____) Other specify_____
4. Level of education: TVET certificate (____), Diploma (_____), Bachelor's Degree (____), Masters Degree (____) or others specify_____
5. Indicate your sector: public business enterprise [for profit] (_____) or public office /bureau [Not for profit] (_____)
6. Current position in your office/sector_____
7. Number of workers in your office/sector_____
8. Number of internal auditors in your office/sector_____

B. The questionnaire items (questions)

The Questionnaire is prepared in Likert-scale form with five (5) point scales. I ask you to tick (√) or circle the appropriate scale (point) that indicates your opinion in table below. The values of scales are **5 = strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = strongly disagree**

S. No	The effectiveness of internal auditors' in identifying noncompliance activities and added contributions to the organizations	The Scales				
		5	4	3	2	1
1	Internal auditors can effectively identify and report any non-compliance activities with my office's/sector's policies and procedures.	5	4	3	2	1
2	Internal Auditors provide useful recommendations and constructive criticisms on non-compliances activities or control systems of the office/sector.	5	4	3	2	1
3	I use the recommendations, criticisms and information provided by internal auditor for decision making.	5	4	3	2	1
4	My office/sector has put its confidence on internal audit staffs, because they may face any problems (non-compliance activities).	5	4	3	2	1
5	The non-compliance reports provided by internal auditors are reliable and significant to my organization/sector.	5	4	3	2	1
6	The internal auditors have confidence to issue audit report because they are capable to determine the nature and frequency of non-compliance activities.	5	4	3	2	1
7	The number of complaints (doubts) about the internal auditors' finding (report) is very low because their report is correct and reasonable.	5	4	3	2	1
8	Internal audit ensures the economical, effective and efficient use of resources in my office/sector.	5	4	3	2	1

9	In my office/sector internal audit ensures activity performed is compliance with established policies, procedures, laws and regulations.	5	4	3	2	1
10	The recommendations of internal audit department provide practical, cost-benefit solutions for correcting the problems that were found.	5	4	3	2	1
11	Internal auditors have the experience and expertise to address corporate risk management problems within the organization	5	4	3	2	1
12	The existing role that the internal audit is playing sufficient enough to address the very purpose for which it is established	5	4	3	2	1
13	Internal auditors in your company are capable of carrying out internal control function under current corporate governance rules	5	4	3	2	1
14	The existence and findings (reports) of Internal Auditors meet my expectations.	5	4	3	2	1
15	The internal auditor reports are highly considered for decision making and internal controls by the management.	5	4	3	2	1

B. Questionnaire Administrated to Internal Auditors

Objective of the Questionnaire

Effective internal audit function is an important management tool to monitor and direct the internal operations of an organization effectively and appropriately. Therefore, the purpose of this research is to assess and identify factors that affect the effectiveness of IA function in different public offices.

In line with this, you are kindly requested to give your response to your personal profile and each statement related with the management's perception of internal audit function, the management support, the organizational independence, the adequate competent internal audit staff and the approved internal audit charter as provided in the table below.

A. The personal profiles:

General Instruction: Please indicate your choice by putting “√” mark in the bracket.

1. Sex/Gender/: Male (____) Female (____)
2. Age (in year): 20 to 29 (____), 30 to 39 (____), 40 to 49 (____), 50 to 59 (____), above 60 (____)
3. Your field of study: Accounting (____), Management (____), Economics (____), other specify _____
4. Level of education: TVET certificate (____), Diploma (____), Bachelor's Degree (____), Masters Degree (____) or others specify _____
5. Professional certification (if any): Certified Internal Auditor (CIA) (____), Certified Public Accountant (CPA) (____) Certified Management Accountant (CMA) (____), other (specify) _____
6. Number of years of experience you work as an internal auditor: _____
7. Does your organization/sector have audit committee? YES (____), NO (____)
8. Indicate your sector: - public business enterprise [for profit] (____) or public office /bureau [Not for profit] (____)
9. What are the activities carried out by IA in your office/sector? You can select more than one.

A. Compliance audit B. Financial audit C. Operational/performance audit E. Internal control system evaluation D. Risk assessment (analysis) audit

B. The questionnaire items (questions)

The Questionnaire is prepared in Likert-scale form with five (5) point scales. I ask you to tick (√) or circle the appropriate scale (point) that indicates your opinion in table below. The values of scales are 5= strongly agree, 4= Agree, 3= Neutral, 2= Disagree, 1= strongly disagree

S. No	The Management Support	The Scales				
		5	4	3	2	1
1	I receive full cooperation, access to records and information from my office/sector	5	4	3	2	1
2	I can get the necessary resources (facilities) that help me to perform auditing activities as needed.	5	4	3	2	1
3	The office/sector supports me by providing training in order to improve my skill and update with the field.	5	4	3	2	1
4	The office/sector supports me to introduce myself with new technology, policy or procedures when it is necessary.	5	4	3	2	1
5	The office/sector supports Internal Auditing staffs by budgeting funds for certification to have relevant education in auditing that allows them to audit all of the organization's/sector's systems.	5	4	3	2	1
	Management's perception of internal audit function					
6	The office/sector has enough awareness and good perception about internal auditing roles.	5	4	3	2	1
7	The office/sector considers internal auditing practices as a value-adding activity and I work smoothly & regularly with the management.	5	4	3	2	1
8	The office/sector encourages me to implement my recommendations, to promote value-added activities and to strength internal audit function.	5	4	3	2	1

9	The position/status of internal audit is clearly recognized by the management in my office/sector.	5	4	3	2	1
10	The office/sector see internal auditing as providing internal assurance through investigations, check & assessment, and consultants & adviser particularity into controls associated to management performance and internal operations.	5	4	3	2	1
	Organizational independence					
11	I perform the auditing activities without any interference from anybody and without any influence from the office/sector.	5	4	3	2	1
12	I freely decide the scope, time and extent of auditing procedures based on auditing standards and the office's/sector's policy.	5	4	3	2	1
13	I objectively examine auditing issues only meeting on reliable audit evidence and no management interest is involved for adjustment beyond auditing standards & values.	5	4	3	2	1
14	I feel free to include any audit finding in my audit work and report directly to responsible body.	5	4	3	2	1
15	I can freely access necessary documents, information and data about the organization/sector for my audit work.	5	4	3	2	1
	The adequate competent internal audit staff					
16	My office/sector has sufficient skilled internal auditors. Most of them have certification in auditing.	5	4	3	2	1
17	It is possible to audit and review each activity on time, and cover the planned scope of auditing activities.	5	4	3	2	1

18	The audit procedures and evidence collections are completed on time, since enough and skilled internal auditors are available or employed.	5	4	3	2	1
19	The internal audit staff number & their skill matches the scope of office's/sector's internal operations.	5	4	3	2	1
20	The work of internal audit is performed with modern technology that uses computerized data tools and specific IA software	5	4	3	2	1
<i>The approved internal audit charter</i>						
21	Internal audit charter is maintained (available) in my office /sector.	5	4	3	2	1
22	The purpose and authority of internal audit is clearly defined in charter.	5	4	3	2	1
23	The purpose and authority of internal audit charter is in line with “Standards for the Professional Practice” formulated by the Institute of Internal Auditors	5	4	3	2	1
24	The IA charter specifies the internal audit activity's position within the office; authorized access to records, personnel, and physical properties relevant to the performance of engagements, and the defined scope of IA activities.	5	4	3	2	1

Appendix B: Reliability Statistics for Variables

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.684	.713	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Internal Audit Effectiveness	103.1250	53.166	.415	.551	.676
Management Support	145.5714	68.395	.464	.513	.628
Management Perceptions	146.2321	70.363	.386	.175	.652
Organizational Independence	146.0893	70.046	.368	.206	.657
Adequate and Competent IA Staff	146.7500	63.827	.630	.596	.612
Approved IA Charter	150.5357	80.871	.391	.343	.666

Appendix C: Assessment of OLS Assumptions for the Model

i. Assessment of Normality

Variables	Test of Normality			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Internal Audit Effectiveness	.108	56	.298*	.962	56	.112
Management Support	.095	56	.185*	.971	56	.247
Management Perceptions	.125	56	.050	.965	56	.140
Organizational independence	.127	56	.072	.920	56	.102
Adequate and Competent IA Staff	.108	56	.200*	.962	56	.224
Approved IA Charter	.124	56	.194*	.939	56	.213

a. Lilliefors Significance Correction *. This is a lower bound of the true significance.

ii. Assessment of Heteroskedasticity

Test of Heteroskedasticity
. estat hettest
Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity
Ho: Constant variance
Variables: fitted values of IAE
chi ² = 0.1800
Prob > chi ² = 0.7894

iii. Assessment of Multicollinearity

Pearson Correlations

		IAE	MS	MP	OIN	ACIAS	AIAC
IAE	Pearson Correlation	1	.399**	.216	.179	.575**	.402**
	Sig. (1-tailed)		.001	.055	.093	.000	.001
	N	56	56	56	56	56	56
MS	Pearson Correlation	.399**	1	.354**	.429**	.492**	.311**
	Sig. (1-tailed)	.001		.004	.000	.000	.010
	N	56	56	56	56	56	56
MP	Pearson Correlation	.216	.354**	1	.220	.343**	.184
	Sig. (1-tailed)	.055	.004		.051	.005	.087
	N	56	56	56	56	56	56
OIN	Pearson Correlation	.179	.429**	.220	1	.262*	.200
	Sig. (1-tailed)	.093	.000	.051		.026	.070
	N	56	56	56	56	56	56
ACIAS	Pearson Correlation	.575**	.492**	.343**	.262*	1	.126
	Sig. (1-tailed)	.000	.000	.005	.026		.176
	N	56	56	56	56	56	56
AIAC	Pearson Correlation	.402**	.311**	.184	.200	.126	1
	Sig. (1-tailed)	.001	.010	.087	.070	.176	
	N	56	56	56	56	56	56

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

iv. Assessment of Autocorrelation (Shown in Appendix D Below)

Appendix D: The Regression Results for IAE

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.743 ^a	.551	.507	2.72871	.551	12.292	5	50	.000	1.952

- a. Predictors: (Constant), Approved IA Charter, Adequate and Competent IA Staff, Organizational Independence, Management Perceptions, Management Support
- b. Dependent Variable: Internal Audit Effectiveness

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	457.635	5	91.527	12.292	.000 ^b
	Residual	372.294	50	7.446		
	Total	829.929	55			

- a. Dependent Variable: Internal Audit Effectiveness
- b. Predictors: (Constant), Approved IA Charter, Adequate and Competent IA Staff, Organizational Independence, Management Perceptions, Management Support

Coefficients^a

Variables	Unstandardized Coefficients		Std. Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	29.676	5.984		4.959	.000					
Management Support	1.705	.202	.424	3.481	.001	.399	.442	.330	.604	1.651
Management Perceptions.	.047	.168	.029	.282	.779	.216	.040	.027	.826	1.211
Organizational Ind.	.135	.164	.087	.825	.413	.179	.116	.078	.805	1.242
Adequate and CIAS	1.196	.191	.698	6.257	.000	.575	.663	.593	.721	1.387
Approved IA Charter	1.255	.298	.423	4.208	.000	.402	.511	.399	.890	1.124

- a. Dependent Variable: Internal Audit Effectiveness

Appendix E. Frequency Table

1. Internal Audit Effectiveness

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
53.00	1	1.8	1.8	1.8
56.00	2	3.6	3.6	5.4
57.00	1	1.8	1.8	7.1
58.00	2	3.6	3.6	10.7
60.00	1	1.8	1.8	12.5
61.00	2	3.6	3.6	16.1
62.00	3	5.4	5.4	21.4
63.00	6	10.7	10.7	32.1
64.00	8	14.3	14.3	46.4
65.00	4	7.1	7.1	53.6
66.00	9	16.1	16.1	69.6
67.00	7	12.5	12.5	82.1
68.00	3	5.4	5.4	87.5
69.00	3	5.4	5.4	92.9
70.00	1	1.8	1.8	94.6
71.00	2	3.6	3.6	98.2
72.00	1	1.8	1.8	100.0
Total	56	100.0	100.0	

2. Management Support

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
15.00	1	1.8	1.8	1.8
16.00	2	3.6	3.6	5.4
17.00	1	1.8	1.8	7.1
18.00	1	1.8	1.8	8.9
19.00	1	1.8	1.8	10.7
20.00	3	5.4	5.4	16.1
21.00	6	10.7	10.7	26.8
22.00	17	30.4	30.4	57.1
23.00	8	14.3	14.3	71.4
24.00	8	14.3	14.3	85.7
25.00	8	14.3	14.3	100.0
Total	56	100.0	100.0	

3. Management Perceptions

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
15.00	2	3.6	3.6	3.6
17.00	1	1.8	1.8	5.4
18.00	1	1.8	1.8	7.1
19.00	7	12.5	12.5	19.6
20.00	11	19.6	19.6	39.3
21.00	4	7.1	7.1	46.4
22.00	10	17.9	17.9	64.3
23.00	9	16.1	16.1	80.4
24.00	4	7.1	7.1	87.5
25.00	7	12.5	12.5	100.0
Total	56	100.0	100.0	

4. Organizational Independence

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
16.00	2	3.6	3.6	3.6
18.00	4	7.1	7.1	10.7
19.00	7	12.5	12.5	23.2
20.00	8	14.3	14.3	37.5
21.00	7	12.5	12.5	50.0
22.00	5	8.9	8.9	58.9
23.00	8	14.3	14.3	73.2
24.00	5	8.9	8.9	82.1
25.00	10	17.9	17.9	100.0
Total	56	100.0	100.0	

5. Adequate and Competent IA Staff

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
15.00	1	1.8	1.8	1.8
17.00	3	5.4	5.4	7.1
18.00	4	7.1	7.1	14.3
19.00	8	14.3	14.3	28.6
20.00	7	12.5	12.5	41.1
21.00	9	16.1	16.1	57.1
22.00	11	19.6	19.6	76.8
23.00	5	8.9	8.9	85.7
24.00	5	8.9	8.9	94.6
25.00	3	5.4	5.4	100.0
Total	56	100.0	100.0	

6. Approved IA Charter

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
15.00	7	12.5	12.5	12.5
16.00	10	17.9	17.9	30.4
17.00	19	33.9	33.9	64.3
18.00	11	19.6	19.6	83.9
19.00	7	12.5	12.5	96.4
20.00	2	3.6	3.6	100.0
Total	56	100.0	100.0	