



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**Determinants of Internal Audit Effectiveness in Roads
Construction Sector, Case Study in Ethiopian Roads
Authority.**

BY

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**October, 2016
ADDIS ABABA,
ETHIOPIA**

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Roads Authority**

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**A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY, SCHOOL
OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF
BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE**

**ST.MARY’S UNIVERSITY SCHOOL OF GRADUATE STUDIES
FACULTY OF BUSINESS**

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Master of Business Administration in Accounting and Finance.

All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

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ACKNOWLEDGEMENT

In the Name of Allah, Most Beneficent and Most Merciful. Praise and thanks to Allah, first and last, Lord and Cherisher of the all the words who taught humankind everything they knew not. May His blessings and His mercy is upon the Holy Prophet Muhammad S.A.W., the best of mankind.

I am very grateful to my supervisor, Assistant Professor Dr. Abebaw Kassie for his guidance, patience, understanding, insight, knowledge, attention, kindness and encouragement throughout my Research accomplishment.

My deepest gratitude also goes to my friends, Hanur Ousman, Seaid Yasin, Benyam Mengestu, Zeyenu AL-Amine and Yonata Zegeye for their support in all the way and my encouragements were certainly very important input in completing this study. I also wish to express my appreciation to the respondents who participated in this study, without their assistance and data provided, this study obviously could not been performed.

Last but not least, my very deepest gratitude and appreciation to my staff for their continuous encouragement and support, especially for My Immediate Supervisor Ato Tewodros Assefaw whose support, interest, and encouragement during my studies.

ACRONYMS AND ABBREVIATIONS

Acronyms

AIAC	Approved Internal Audit Charter
AQ	Audit Quality
ERA	Ethiopian Roads Authority
IA	Internal Auditors
IIA	Independence of Internal Audit
IAE	Internal Audit Effectiveness
LS	Ordinary Least Square
MoFED	Ministry of finance and Economic Development
MS	Management Support
OAG	Office of the Audit General
SPSS	Statistical Package for Social Science

Abstract

The main purpose of this study is to investigate on the determinants of internal audit effectiveness. The study has been conducted by taking purposive sample and data was collected using structured questionnaires distributed to all internal audit staffs and middle level managers of Ethiopian Roads Authority. The data analysis part was done using SPSS version 20 (Statistical Package for the Social Science). Regarding to demographic variables they were analyzed through descriptive statistics tools. Whereas, to investigate the effect of Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter on internal audit effectiveness the correlation and regression analysis were used. According to the regression output Audit Quality, Competence of internal audit, Management support, Independence of internal audit and approved Internal Audit Chart were contributed significantly for the internal audit effectiveness. All of these five independent variables are making 58.7% of the contributions for internal audit effectiveness in Ethiopian Roads Authority. Ethiopian roads Authority 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. The study is significant for academicians as it helps to improve the understanding of factors influencing internal audit effectiveness. Additionally, managers can use the finding of the study to solve the practical problems facing the internal audit effectiveness specifically in Ethiopian roads authority.

Key Words: *Internal Audit; Ethiopian Roads Authority; internal audit effectiveness; determinants of internal audit effectiveness;*

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Chapter One

1. Introduction

1.1. Background of the Study

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).

The emergence of internal audit as a discipline is traced to the early 1940s when the Institute of Internal Auditors (IIA) was established in 1941 at Lake Mary, Florida, USA. The first book on internal auditing, *Modern Internal auditing*, was also published by Victor Z. Brink in 1942 (Moeller 2005). Subsequently, the internal audit profession has been growing globally under the global leadership of the Institute of Internal Auditors (IIA) (Soh and Bennie, 2011).

The need to effectively utilize funds on public sector was the main cause for the rapid implementation of modern audit practice in Ethiopia and to achieve this, the Office of the Audit General (O.A.G) is formulated in 1961 by amending the office and auditors duties and responsibilities. In 1987 and on wards there were significant developments in public sector auditing systems. Besides, 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 the proclamations. (Kinfu, 1990; Lemma Argaw,2000). On July 1, 1997 the Financial Administration Regulations No. 17/1997 was issued in which the responsibility of internal audit function was transferred from the Office of the Auditor General to the Minister of Finance to develop and maintain appropriate standards of work. Bethlehem Fekadu (June, 2009)

The modern internal auditor seeks to add value by laying emphasis on improving procedures and policies through reduced costs, increased bottom line and better services to users (Eden and Moriah, 1996) . As a result, senior management and the board increased their reliance on the internal audit to improve the organization's operation and to systematically evaluate the management or organizational risks. Internal auditing provides a basis for correcting deficiencies that have get away from the first line of defense before these deficiencies become uncontrollable or are exposed in the external auditor's report (Eden and Moriah, 1996). 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). However, the effectiveness of internal audits depends on different factors and understanding factors which affects the internal audit effectiveness is one of the prerequisite to get the benefits of internal audit. Considering this, the objective of this study is to investigate the determinants of internal audit effectiveness in Roads construction sector particularly in Ethiopian Roads Authority.

1.2. Statement of the problem

In corporate governance internal audit issue has received increasing attention in recent years, due to different reasons. 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).

The role of internal audit is to determine that internal control is in place by reviewing policies and practices in the organization in order to avoid loss of financial resources, noncompliance and also to provide reasonable assurance that public money has been spent in an efficient and effective manner (Eden and Moriah,1996).

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 Ethiopian 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 to the above challenges, different factors like absence of strategic plan and management support, organizational independence of internal auditors, adequate and competent of internal audit staff and the presence of approved internal audit and others factors affects internal audit effectiveness (Mihret and Yismaw, 2007).

The Ethiopian Roads Authority was established in 1951 namely Imperial Highway Authority under Proclamation number 115/1951 as semi- autonomous agency with specific deities to plan, design, Construct and maintain roads. Since its establishment, due to change in government policy and strategy, ERA has been re-established several times with various physical and policy issue assignment. (Highlight of organizational Change Accomplishment & plan, 2013).

During its time operation, the authority has developed different Road development programs with different phases of achieving its mission and objective. Currently In order to improve

transport related infrastructures the Ethiopian government formulated a series of program called Roads sector develop program, it have five packages and currently it is under the fifth package. It has a five years span and the total budget of this program is around ETB 323.3 billion birr (The road sector development program phase 5, 2015).

The effectiveness of this program is underlined on the proper utilization of this huge money and internal audit contributes more for the successful utilization of funds. However, Ethiopia invest nearly one third of its budget to the road sector but it is reported that there has been a gap in efficient utilization of financial resource, proper maintaining of financial transaction and adequately safeguard of asset of the Organization. Ethiopian roads authority management letter on the Accounts by Audit Services Corporation (2015).

Also, to the best of my knowledge, until now, no empirical research on the internal audit's effectiveness has been conducted within a Road Construction Sector. This article is an attempt to fill this literature gap.

Considering the above facts, identifying factors which affecting internal audit effectiveness is essential for organizational success and effective utilization of public money. Therefore, this study was examine the effects of Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter on internal audit effectiveness.

1.3. Objectives of the study

1.3.1. General Objective

The general objective of the study is to identify determinants of internal audit effectiveness in Roads construction sector particularly in Ethiopian Roads Authority.

1.3.2. Specific Objectives

1. To examine the effect of Audit quality on internal audit effectiveness.
2. To investigate the effect of auditors competency on internal audit effectiveness.
3. To identify the effect of top management support on internal audit effectiveness.
4. To examine the effect of Independence of internal audit on internal audit effectiveness.
5. To identify the effect of having approved internal audit charter on internal audit effectiveness.

1.4. Hypothesis of the study

Based on the review of existing literature (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Haimon, 1998, Arena and Azzone, Van Peurse (2005)the following hypothesis of the study formulated;

H1₀: There is no Strong positive relationship between Audit quality and internal audit effectiveness.

H1₁: There is a Strong positive relationship between Audit quality and internal audit effectiveness.

H2₀: There is no Strong positive relationship between auditor's competency and internal audit effectiveness.

H2₁: There is a Strong positive relationship between auditor's competency and internal audit effectiveness.

H3₀: There is no Strong positive relationship between top management support and internal audit effectiveness.

H3₁: There is a Strong positive relationship between top management support and internal audit effectiveness.

H4₀: There is no Strong positive relationship between Independence of internal audit and internal audit effectiveness.

H4₁: There is a Strong positive relationship between Independence of internal audit and internal audit effectiveness.

H5₀: There is no Strong positive relationship between having approved internal audit charter and internal audit effectiveness.

H5₁: There is a Strong positive relationship between having approved internal audit charter and internal audit effectiveness.

1.5. Scope of the study

The study was focus on analyzing factors which affects internal audit effectiveness and to examine this factors data was taken from Ethiopian roads authority. Because of time and budget limitation the researcher forced to collect data from one organization but it was good if the research is done on all companies under the roads sector. In Addition to that it is known that different factors affects internal audit effectiveness, But the research forced to considered only five factors namely; Audit Quality, Auditors Competency, Top management Support, independence of internal audit and internal Audit effectiveness.

1.6. Significance of the Study

In developing countries like Ethiopia, studying internal audit effectiveness is essential to compact fraud and corruption. One of the base to increase internal audit effectiveness is studying factors which affect internal audit effectiveness, that why this study focus on identifying factors which affects internal audit effectiveness on Ethiopian roads authority. The study will be useful for both academicians and practitioners. For academicians it will further improve the understanding of factors influencing internal audit effectiveness. For practitioners it may help to solve the practical problems facing the internal audit effectiveness specifically for Ethiopian roads authority. The result of the study may lead to recommendation to strengthen any weak area revealed in the empirical survey.

1.7. Organization of the Study

The project work has the following five chapters

- **Chapter one** Introduction that included background of the study, statement of the problem, general and specific objectives, Scope Of The Study and significance of the study,
- **Chapter two** include review of literature comprise Internal Audit, the relationship between Internal Audit and Internal Audit Effectiveness, the relationship between Audit Quality, Auditors competency, Top Management Support, Independence of internal audit, Approved Internal Audit Charter and Internal Audit Effectiveness.
- **Chapter three** Research methodology -consists of research design, sources of data collection, sample size and sampling procedures, method of data collection and data analysis will be discussed,
- **Chapter four and Chapter five** findings from the survey result and general conclusions, possible recommendations to the problems that was drawn from the survey data, major limitation of the study and indication of further studies in the area was discussed respectively.

Chapter Two

2. Review of Related Literature

2.1. Internal Audit and Related Literature

Different literatures defines internal audit in different ways but the standard definition is made up of important issues that form the basic framework of internal audit principles. 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:

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization 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.

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.

The above definitions of internal audit feature an element of independence, although its extent, and how it is achieved, is a topic in its own right. IIA Implementation Standard 2110.C1 says that: ‘during consulting engagements, internal auditors should address risk consistent with the engagement’s objectives and should be alert to the existence of other significant risks’. 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).

Meanwhile the primary role of internal audits is to provide independent assurances that the organization is, or is not, managing risk well. ‘Designed to add value’ as a service, auditing has to form a client base and understand the needs of the organization. Here the service role should lead to a defined benefit to the organization rather than internal audit working for its own mysterious goals. Adding value should be uppermost in the minds of chief audit executives (CAE) and this feature should drive the entire audit process. Therefore, the CAE and internal auditors need to meet or exceed these expectations to be effective. With the ever-changing business environment, the effectiveness and credibility of the internal audit function is crucial.

Internal auditing (IA) serves as an important link in the business and financial reporting processes of corporations and not-for-profit providers (Reynolds 2000). Internal auditors play a key role in monitoring a company’s risk profile and identifying areas to improve risk

management (Goodwin-Stewart and Kent 2006). The aim of internal auditing is to improve organizational efficiency and effectiveness through constructive criticism. IA has four main components: (1) verification of written records; (2) analysis of policy; (3) evaluation of the logic and completeness of procedures, internal services and staffing to assure they are efficient and appropriate for the organization's policies; and (4) reporting recommendations for improvements to management (Eden and Moriah 1996).

The subject is worthy of attention because internal auditors are important, even crucial, in an economy that relies upon independently produced information (Van Peurseem 2005). Indeed, IA has become an indispensable management tool for achieving effective control in both public and private organizations (Eden and Moriah 1996). Control mechanisms are those processes set up to monitor and to direct, promote or restrain the various activities of an enterprise for the purpose of seeing that enterprise objectives are met (Sawyer 1988; Coram, Ferguson and Moroney 2008). By detecting weaknesses in management operations, IA provides a basis for correcting deficiencies that have eluded the first line of defiance before these deficiencies become uncontrollable or are exposed in the external auditor's report (Eden and Moriah 1996).

2.2. Types of Audits Performed By Internal Auditors

A variety of audits are performed in the review of organizational programs and Resources.

(Aren, 1999; Dandago, 2002 and Sabari, 2003) These audits include:

2.2.1. 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.

2.2.2.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 resources.

2.2.3.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. Information Systems (IS) 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.

2.2.4.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.

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.

2.3. Internal Audit Effectiveness

The word “effectiveness” have been defined by different researchers, for instance Arena and Azzone (2009) defined effectiveness “as the capacity to obtain results that are consistent with targets objective,” while, Dittenhofer (2001) view effectiveness as the ability toward the achievement of the objectives and goals. In the same context, a

program can be seen as effective if its outcome goes along with its objectives (Ahmad, Othman, & Jusoff, 2009; Mihret et al, 2010).

Institution of Internal Audit IIA (2010) defined internal audit effectiveness “as the degree (including quality) to which established objectives are achieved. While Mizrahi and Ness-Weisman (2007) give their own definition which is in line with the ability of the internal auditor intervention in prevention and correction of deficiencies and they finally defined internal audit effectiveness as “the number and scope of deficiencies corrected following the auditing process.”

Therefore, going by the above definitions of effectiveness and audit effectiveness, it’s clear that audit effectiveness or internal audit effectiveness is means the same thing because they all have central target which is ‘the ability of achieving established objective.

Based on the above definition, this study defined internal audit effectiveness as the ability of the audit work to achieved established objective within the organization.

Mihret and Yismaw (2007) described the characteristics of effective internal audit unit from the internal audit point of view. Effective Internal Audit 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 audit attribute. Therefore Understanding the factors that influence internal audit effectiveness is important. In order to make internal audit to be effective more researches should be undertaken on factors which affects internal audit effectiveness. For examples; Arena and Azzone (2010), Chaveerug (2011) and Mihret et al (2010) emphasize the need for future studies to examining the factors that influence internal audit effectiveness and the possible interactions among them. Also there are needs for a more comprehensive study on the issue of internal audit effectiveness both conceptual and empirical (Cohen & Sayag, 2010), similarly, considering the little literature about the measurement of auditing effectiveness particularly in the public sector, more need to be done (Mizrahi & Ness-Weisman, 2007).Different research have different direction to study about the effectiveness of internal audit. Dessalegn (2007)

did a case study in Ethiopian to give a frame work of four important factors which are the “audit quality, management support, organizational setting, and auditee attributes” to evaluate the effectiveness of internal audit. Meanwhile, Moorthy (2011) mainly focused on information technology which can affect the audit process, and give examples about IT system adopted by auditing process. Mu’azu (2014) did a study on the audit committee to give empirical evidence about the influence of audit committee on internal audit. Moreover, Zulkifli (2014) directly stated some factors such as independence/objectivity of internal auditors which is different from Dessalegn (2007) that evaluate the effectiveness of internal audit.

The main aim of this research will be to examine factors which affect internal audit effectiveness and after reviewing literatures the following factors will be taken as an independent variable for internal audit effectiveness. These are Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and the presence of internal audit charter and the existing literatures are reviewed as follow.

2.3.1. Internal audit quality

Internal audit quality require auditors to carry out their role objectively and in compliance with accepted criteria for professional practice, such that internal audit activity will evaluate and contribute to the improvement of risk management, control and governance using a systematic and disciplined approach IIA (2008). This is important not only for compliance with legal requirements, but because the scope of an auditor’s duties could involve the evaluation of areas in which a high level of judgment is involved, and audit reports may have a direct impact on the decisions or the course of action adopted by management (Bou-Raad, 2000). Greater quality of IA work – understood in terms of compliance with formal standards, as well as a high level of efficiency in the audit’s planning and execution – will improve the audit’s effectiveness. (Bou-Raad, 2000)

Internal audit quality is examined as one of the variables associated with internal audit effectiveness by Mihret and Yismaw (2007) they did their research on the public sector of Ethiopia, and their findings indicate that internal audit effectiveness is affected by the internal audit quality, along with the support of management, the organization environment and the characteristics of the organization. In another research Barac and Van Staden (2009) studied

the relation between the perceived quality of internal audit and the safety of corporate governance structure in South Africa. In contrast to the above, the results indicate that there is no correlation between the corporate governance structures and the perceived quality of internal audit.

In recently, examining one hundred and eight Israeli organizations, Cohen and Sayag (2010) also considered the quality of internal audit work as a factor of internal audit effectiveness. Along with the above Alzeban and Gwilliam (2014) emphasize the impact of internal audit quality to internal audit effectiveness.

2.3.2. Auditor's competency

Competency can be relate to the ability of an individual to perform a job or task properly base on academic level, experience, skill and the effort of the staffs for continuing professional development. Competency determines the efficiency of the auditor in setting a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's activities and financial management as well as governance processes

Competence of internal auditor also considered as important factor for effective internal audit. In line with ISPPIA, Mousa (2005) considered proficiency and due professional care (competence) as a significant element of internal auditing. Turley and Zaman (2007) examining the factors that affect effectiveness of internal audit teams, argue that communication between the members of the audit team has a positive impact on the outcome of the audit. Abu-Azza (2012), in addition Haimon (1998), Mihretet al. (2010) and Obeid (2007) found that competence of internal auditors positively related to perceived IA effectiveness. Moreover, Cohen and Sayag (2010) argue that professional proficiency of internal auditors is of major importance for effective internal auditing. In addition many prior academic researchers have focused on the need for an internal auditor to be sufficiently qualified if a high level of effectiveness is to be achieved (Abu-Azza, 2012; Al-Twajjry et al.,2003; Mihret and Yismaw, 2007). Finally, Alzeban and Gwilliam (2014) argue that higher internal audit effectiveness is associated with greater competence of internal audit staff. Therefore, this study extends the prior studies by examining the relationship between competence of internal auditors and IA effectiveness.

2.3.3. Top Management Support

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. Internal audit effectiveness according to the literature is the outcome of the support given by the top management. As it is analyzed above, Mihret and Yismaw (2007) argued that there is a positive relationship between top management support and internal audit effectiveness. In line with the above study, management support is also considered as the main determinant of internal audit effectiveness according to Cohen and Sayag (2010). Similarly, Alzeban and Gwilliam (2014) indicated that management support is positively and significantly associated with internal audit effectiveness and is also positively associated with all the other variables affecting internal audit effectiveness.

2.3.4. Independence of internal audit

Being Independent is the freedom from the control and direct influence of line management this definition is an important to the extent of audit work and enhances internal audits objectivity and integrity. Internal auditors should be independent form the activity they are auditing. Independence allows internal auditors to perform the impartial and unbiased judgments to the proper conduct of audit and achieved through organizational status

and objective (Simon, 1995). Independence of internal audit is considered by Zhang et al. (2007) as a determinant of internal audit effectiveness. Cohen and Sayag (2010) also argue that organizational independence of internal audit affects internal audit effectiveness. Auditor independence has long been considered as the key driver of the audit function. Without independence, internal audit simply becomes a part of the management team, losing its ability to offer a fresh perspective (Yee et al., 2008). (Al-Twajry et al. 2003). Abu-Azza (2012), Cohen (2010), Haimon (1998) and (Mihret et al. (2010), found that internal auditor independence positively related to perceived IA effectiveness.

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).

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 non reasonable 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 Peursem (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 Peursem, 2005) which in turn affects IA effectiveness.

2.3.6. Summery

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).

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 skill of internal auditors team and the independence of internal auditors activities are positively related with internal audit effectiveness (Arena and Azzone, 2009).

As it is analyzed in the literature review, Mihret and Yismaw(2007) argued that there is a positive relationship between top management support and internal audit effectiveness. management support is also considered as the main determinant of internal audit effectiveness according to Cohen and Sayag (2010). Similarly, Alzeban and Gwilliam (2014) indicated that management support is positively and significantly associated with internal audit effectiveness and is also positively associated with all the other variables affecting internal audit effectiveness.

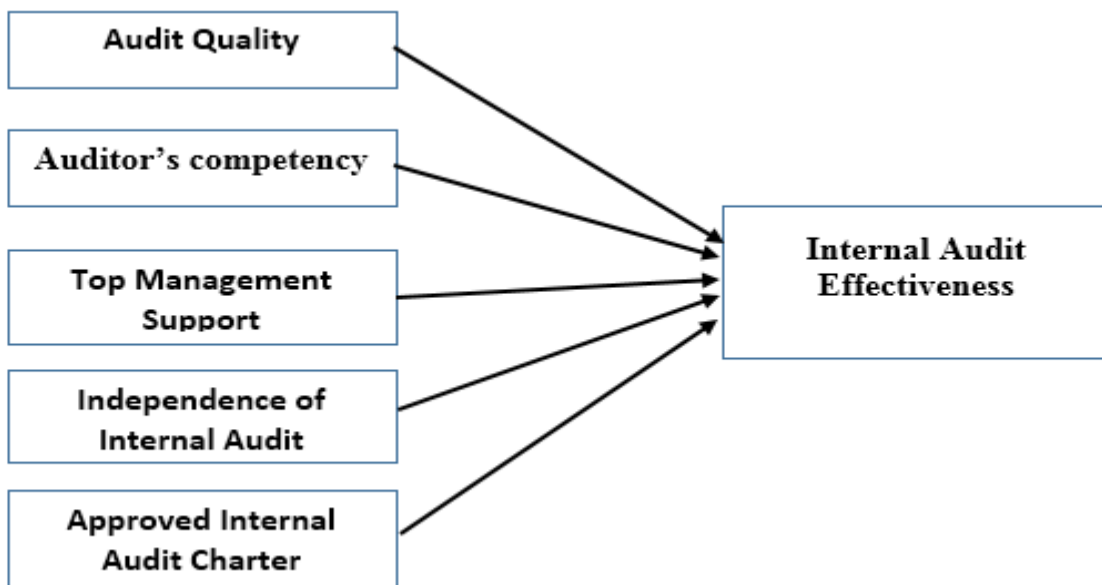
Finally, a well-defined internal audit charter will helps internal auditors to be effective and contributes to achieve the attempt of ensuring independent status of internal auditors (Van Peurseem, 2005; O'Regan, 2002).

From the empirical literature studied it can be noted that effectiveness of internal audit function is determined by Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter. Therefore, this study also aims to establish the relationship between effectiveness of internal audit function (IAF) and the independent variables that affect the internal audit task accomplishments in case of Ethiopian Road Authority.

Those variables are measured in questionnaires & Questionnaires were adopted and modified from the prior author and literature review Cohen and Sayag (2010), Van Peurseem (2005), Shewamene Hailmariam (2014) ,Internal Audit Quality Assessment Framework (2013/ www.hm-treasury.gov.uk, Questionnaires will be prepared in the form of Likeret-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).

2.3.7. Research frame work

Figure: Research Frame Work



Source: (Seid Muhammed, 2015)

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 was focus on examining the determinants of internal audit effectiveness in Ethiopian Roads Authority and used explanatory research design which utilizes quantitative research methods and used co-relation and regression analysis to explain the effects of Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter on internal audit effectiveness.

3.3. Population of the study

The populations of the study were all the internal audit staffs and middle level managers of Ethiopian Roads authority. The logic behind selecting all internal audit staffs and middle level managers is that internal audit staffs and middle level managers have direct relationship with the work of internal audit and this lead to acquire convenience information about determinants of internal audit effectiveness of the organization.

3.4. Sample size and Sampling Technique

The researcher used the purposive sampling. Lavrakaz (2008) states that a purposive sample, also referred to as a judgmental or expert sample, is a type of non-probability sample. The main objective of a purposive sample is to produce a sample that can be logically assumed to be representative of the population. According to the Ethiopian roads authority structure middle level managers include Directors, senior staff assistants & staff assistants, the number

of management members are 40. Whereas, the number of internal auditing sections staffs are 12. Therefore, the total population of the study was 52 Ethiopian road authority staffs.

3.5. Source of data

The study is used primary data and data were collected through structured questioners, with a form of fixed-response alternative questions that require the respondent to select from a predetermined set of answers to every question. And primarily data are collected from all middle level management and internal audit staff members of Ethiopian Roads authority. In order to insure the validity and reliability of the instruments, the questionnaires were tested, whether the questionnaires is able to capture the required data and is easily understandable as well as whether there were any vague and confusing questions in the questionnaire.

3.6. Methods of Data Collection

The questionnaires was prepared in the form of five item Likert-Scale type, where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932). Customized questionnaires were adopted from Al-Twaijry (2003), Cohen and Sayag (2010), Van Peurseem (2005), Shewamene Hailmariam (2014) and Internal Audit Quality Assessment Framework (2013/ www.hm-treasury.gov.uk,

Since the sample size is well manageable which is 52 Ethiopian roads authority Middle level managements and internal audit staffs, the researcher himself administered the questioners, this give an opportunity to the respondent to ask any clarification about the questionnaires and in return, this increase the validity and reliability of the instruments.

3.7. Methods Of Data Analysis

The data analysis part were done using SPSS version 20 (Statistical Package for the Social Science). Regarding to demographic variables they were analyzed through descriptive statistics tools. Whereas, to investigate the effect of Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter on internal audit effectiveness the correlation and regression analysis were used. Before, conducting the analysis to insure reliability and consistency of the instrument the Cronbach's Alpha (α) test were made.

3.8. Ethical Considerations

In order to keep the confidentiality of the data that was given by respondents; the respondents are not required to write their name and assured that their responses were treated in strict confidentiality. The purposes of the study were disclosed in the introductory part of the questionnaire. Furthermore, the researcher attempted its best to avoid misleading or deceptive statements in the questionnaire. Lastly, the questionnaires were distributed only to voluntary participants.

3.9. Variables used in the Research

3.9.1. Dependent variable

Effectiveness of internal audit forms our dependent variable. Though several parties emphasize the need to measure internal audit effectiveness, there is no generally acknowledged measure for this purpose (Arena and Azzone, 2009). Based on the above consideration and according to the literature review, the dependent variable is examined 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 organization. Compliance audit is a type of audit service that mostly performed by internal auditors of the organization Cohen and Sayag (2010). Compliance is defined as 'observing 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 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).

To understand the level of IA effectiveness a 5-scale point Likert- type of 9 different items or questionnaires were constructed and distributed to the respondents. Questioners were adapted from Shewamene Hailmariam (2014) and Internal Audit Quality Assessment Framework (2013).

3.9.2.Independent variables

Quality of internal audit, competence of internal audit team, management support, independence of internal audit, finally Approved Internal Audit Chart is examined as independent variables. In this respect, the quality of internal audit (first independent variable) is assessed by six items. Four items are derived from Cohen and Sayag(2010) and two items from Internal Audit Quality Assessment Framework (2013). These items are: the Scope &Coverage of internal audit work, the efficiency of internal audit's work, appropriate justification of internal audit's findings, Implementation and follow up of internal audit's recommendations and rationality of internal audit's report. The second independent variable is the competence of internal audit team which is measured by five items. These items are derived from the studies of Al-Twajjry (2003), Audit Quality Assessment Framework (2013), Mihret et al. (2010) and Alzeban and Gwilliam (2014). These items are: the level of professional qualifications of internal auditors, Work experience of internal auditors, the participation of internal auditors in educational seminars, the educational appropriateness of internal auditors. The third independent variable Management support is assessed by five items according to Cohen and Sayag (2010) and Alzeban and Gwilliam (2014) These item are include management trust and value of internal audit report, Strategic support and consideration of internal audit, management support of internal audit and budget allocation for internal audit. The fourth independent variable is independence of internal audit is assessed by five items according to Cohen and Sayag (2010) and Alzeban and Gwilliam (2014). More specifically, the independence is assessed regarding the internal audit's independence to decide the extent of auditing procedures regarding audit standard and organization policy, the unrestricted access of information to internal auditors, General independence of internal auditors, implementing audit recommendation and participation of internal audit in the development of company's processes. Final independent variable were Approved internal audit chart it was assessed by four item according to Cohen and Sayag (2010).

3.10. Model Specification

The goal of this analysis was to know the level to which internal audit effectiveness is determined by Audit Quality, Audit Competency, Management Support, Independence of internal audit and Approved Internal Audit Charter by considering R square value, beta coefficient and P-value for the significant of the relation. Mathematical representation. Therefore the following model was formulated for this research in order to test the research hypothesis developed.

$$Y=a+B_1x_1+B_2x_2+B_3x_3+B_4x_4+B_5x_5+e_i$$

Where:

a= Represents the dependent variable that measure level of internal audit effectiveness. To minimize multi-collinearity effect, the dependent variable IAE is determined based on the average score for main independent variables.

X1 to X5 = the coefficient, in which every marginal change in variables on internal auditor's effectiveness affects correspondingly.

e_i = The error term

Y=Internal Audit Effectiveness

X1=Audit Quality

X2=Auditors competency

X3= Top Management Support

X4= Independence of internal audit

X5= Approved Internal Audit Charter

Chapter Four

4.1. Data Analysis and Presentation

Chapter four describes data analysis and interpretation part. 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 Ethiopian Roads Authority. The discussion begins with the questionnaires' response rate followed by the descriptive statistics of the respondent's demographic characteristics; like gender, age, Work Experience 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.

4.1.1. Scale Reliability Test

Scale reliability test is done to check whether a scale applied in this research consistently reflect the subset it measures. 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. The accepted limit of Cronbach's α is 0.70 in this paper, the Cronbach's α is computed using SPSS package 20 (Statistical Package for Social Sciences) and was found to be more than 0.70 that was 0.896. Therefore data obtained using these scales are highly reliable to do further analysis.

Table 4.1.1. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.837	.896	34

Source: Survey data (2016)

4.2.Descriptive Statistics

4.2.1. Response Rate

The questionnaires were distributed to both the Middle Level managers &the internal auditors Staffs of Ethiopian Roads Authority. Out of the total 52 set of questionnaires38 questionnaires were returned, yielding 81% response rate. The response rate was high because for the majority of respondent the researcher used self-administered method.

4.2.2. Characteristics of Respondent

On the below table the demographic characteristics of the respondents is clearly presented.

Table 4.2.1.Respondent Characteristics

Item		Frequency	Percent	Valid Percent
Gender	Male	32	53.3	84.2
	Female	6	10.0	15.8
Age	20-29	3	5.0	7.9
	30-39	11	18.3	28.9
	40-49	12	20.0	31.6
	50 Above	12	20.0	31.6
Level of education	TVET certificate	0	0	0
	Diploma	0	0	0
	Bachelor's Degree	30	50.0	78.9
	Master s Degree and above	8	13.3	21.1
Services year	1-5	5	8.3	13.2
	6-10	9	15.0	23.7
	11-15	14	23.3	36.8
	15 above	10	16.7	26.3

Source: Survey data (2016)

Demographic characteristics of the respondents regarding gender, age, educational level and work experience of the participants are presented in Table 4.3.1. According to the table, the study respondents were made of 84.2% males and 15.8% females, indicating dominance of males in the sample used. Concerning the age of the participants, the highest percentage is between 40 and above 50 years old (63.2%). As regards the educational level 78.9% obtain a bachelor degree and also 21.1% obtain a postgraduate degree. Respondents have remarkable work experience in view of the fact that 36.8% have between 11 and 15 years work experience and 26.3% have more than 15 years work experience.

4.2.3. Internal Audit Effectiveness

Table 4.2.2 Internal Audit Effectiveness

Internal Audit Effectiveness	N	Mean	Std. Deviation
The existing role that the internal audit is playing sufficient enough to address the very purpose for which it is established	38	3.94	.80362
The organization internal audit ensures activity performed is compliance with established policies, procedures, laws and regulations.	38	3.55	.89132
Internal audit activity influences positive change and continuous improvement to business processes, bottom line results and accountability within the organization	38	2.71	1.29255
Internal audit activity promotes appropriate ethics and values within the organization	38	3.18	1.35278
The Organization Internal Audit finding & recommendations are critical & constructive to improve non-compliances activities or control systems of the organization.	38	2.97	1.30460
The non-compliance reports provided by internal audit are reliable and significant to the organization.	38	3.47	.97916
The number of complaints (doubts) about the internal audit finding (report) is very low because the report is correct and reasonable.	38	2.71	1.29255
Internal audit ensures the economical, effective and efficient use of the organization resources.	38	3.18	1.35278
Internal auditors of the organization are capable to carrying out internal control function under current corporate governance rules	38	2.97	1.30460
Total Item Mean		3.19	

Source: Questionnaires and SPSS output (2016)

The above nine questionnaires was distributed to measure the effectiveness of internal audit in Ethiopian road authority. The five items likert scale was utilized. In the five items likert scale the

overall average mean score resides between 1 and 5. As shown in the above table the overall average mean score for internal audit effectiveness in Ethiopian road authority is 3.19 which is around the mid-point i.e. 2.5, Therefore, it can be concluded that internal audit effectiveness in Ethiopian road authority is moderate. This requires managements support and strategic views. So, the study revealed that internal audit is not large enough to efficiently carry out its duties. In this respect, senior management ought to be more aware of internal audit’s needs.

4.2.4. Audit Quality

Table 4.2.3 Audit Quality

Audit Quality	N	Mean	Std. Deviation
The annual audit plan is determined completely by the internal auditor	38	3.86	1.06
Auditing is conducted on areas which are very significant to the organization.	38	3.76	1.26
The internal audit is able to cover all organizational units and all issues.	38	3.24	1.02
The responses from parties which are being audited are submitted in written form and their response is relevant and comprehensive.	38	3.63	1.07
There is regular follow-up by the internal audit staff to examine actions taken to correct the problems found.	38	3.42	1.03
Total Item Mean	38	3.58	

Source: Questionnaires and SPSS output (2016)

To measure audit quality in Ethiopian road authority five questionnaires with a five point likert scale were distributed. In the five items likert scale the overall average mean score resides between 1 and 5 and the average mean score is 2.5. Thus overall average mean score were used to make descriptive analysis.

In Ethiopian road authority the overall mean score of Audit Quality is 3.58 which are nearly good; from this we can infer that the quality of internal audit is good. As we can see in the above table Audit quality in terms of conducting audit on very significant area, ability to cover all

organizational units, independence in decision making regarding annual audit plan were found good, but the management of Ethiopian road authority are expected to work more to make audit quality excellent.

4.2.5. Auditors Competency

Table 4.2.4 Auditors competency

Auditors competency	N	Mean	Std. Deviation
Internal auditors possess sufficient experience to understand the organization's systems.	38	3.94	.80362
The internal audit staffs have the appropriate and relevant education in auditing that allows them to audit all of the organization's systems (financial, operational, logistical and computerized).	38	3.50	.97952
Internal auditors undertake continuous professional development activities (such as professional association sponsored programs and correspondence courses)	38	3.36	1.05064
The internal audit staff number & their skill match the scope of organization internal operations.	38	3.76	.88330
The work of internal audit is performed with modern technology that uses computerized data tools and specific IA software	38	3.39	1.12801
Total Item Mean		3.59	

As shown in the above table Internal auditors possess sufficient experience to understand the organization's systems (X3.94) and their skill match the scope of organization internal operations (x=3.79). However, the internal auditors didn't take continuous professional development activities (such as professional association sponsored programs and correspondence courses) (x=3.36). The overall average mean value of Ethiopian road authority's Auditors

Competency is 3.59 which are above the average mean score; therefore we can imply that in Ethiopian road authority internal auditor’s competency is good.

4.2.6. Management Support

Table 4.2.5 Management Support

Management Support	N	Mean	Std. Deviation
Top level management trusts and values the advice of the internal audit service	38	4.34	.62715
The internal audit service is seen as a key strategic partner throughout the organization	38	4.36	.91300
Senior managers understand and fully support the work of internal audit	38	3.18	1.11149
Internal auditors have full access to records and information they need in conducting audits	38	4.23	.48958
Internal audit obtains a sufficient budget to successfully carry out its duties	38	3.76	.75101
Total Item Mean		3.99	

One of the independent variable used in this study is management support for internal audit work. As shown on the above table, in Ethiopian road authority internal audit service is seen as a key strategic partner throughout the organization ($X=4.36$) and top management trust and value the advice of the internal audit services ($X=4.34$), similarly internal audit staffs have full access to records and information which are required for their works. However, the amount of budget allocated to internal audit work doesn’t meet the expectation of internal audit staffs ($X=3.76$).

The overall average mean value of Ethiopian road authority’s top management support for internal audit work is 3.99, which is near to the upper limit of five scale likeret scale question average mean time. Therefore, we can conclude that the support given by Ethiopian road authority top management to internal audit work is attractive.

4.2.7. Independence of Internal Audit

Table 4.2.6 Independence Of Internal Audit

Independence Of Internal Audit	N	Mean	Std. Deviation
I freely decide the scope, time and extent of auditing procedures based on auditing standards and the organization policy.	38	4.05	.69544
The internal auditing operates totally independently, can audit any issue it considers in need of auditing.	38	3.68	.87318
I perform the auditing activities without any interference from anybody and without any influence from the organization.	38	3.36	1.05064
The internal audit staff has free access to information and data about the organization, and unrestricted access to its site	38	2.97	1.30460
The organization encourages me to implement my recommendations, to promote value-added activities and to strength internal audit function.	38	3.84	.85840
Total Item Mean		3.6	

Source: Questionnaires and SPSS output (2016)

The other main independent variable of this is study was organizational Independence of internal audit section. Being Independent is the freedom from the control and direct influence of line and upper managements. As show in the above table Ethiopian road authority internal audit staffs are free to decide the scope, time and extent of auditing procedures based on auditing standards and the organization policy (X=4.05) similarly, The internal auditing operates totally independently, can audit any issue it considers in need of auditing (X=3.68) whereas, the internal audit staff has limited access to information and data about the organization, and unrestricted access to its site (X=2.97). The overall average mean value of organizational independence of internal audit section in Ethiopian road authority is 3.6, which is above the mid value of five

scale likeret scale question. Therefore, we can conclude that the internal audit section in Ethiopian road authority is independent.

4.2.8 Approved Internal Audit Charter

Table 4.2.7 Approved Internal Audit charter

Approved Internal Audit charter	N	Mean	Std. Deviation
An internal audit Charter defines the purpose, authority and responsibility, within the organization, consistent with the Definition of Internal Auditing, the code of ethics and the Standards	38	3.52	.82975
The Charter defines the nature and scope of the assurance and consulting services provided to the organization (including any assurances provided to parties outside of the organization) is such that it can provide independent and objective assurance.	38	3.21	1.14273
The Charter clearly defines internal audit's role in evaluating and contributing to the development of risk management, control and governance processes Internal audit's role in relation to any fraud-related	38	3.52	1.03289
The purpose and authority of internal audit charter is in line with "Standards for the Professional Practice" formulated by the Institute of Internal Auditors	38	3.23	1.10121
Total Item Mean		3.37	

Source: Questionnaires and SPSS output (2016)

An approved internal audit charter is the other variable of this study and the finding of the study revealed that the overall average mean value of an approved internal Audit chart is 3.37 which are above the mid mean value five point likert scale therefore, it can be implied that the overall average response for presence of Approved Internal Audit Charter was good. All the questions under this category have got a mean score of 3.52, 3.21, 3.52, and 3.23 respectively.

4.3. Correlation Analysis

4.3.1. 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). If the Durbin-Watson is substantially less than 2, there is evidence of positive serial Correlation. The Durbin-Watson statistics value are 1.827 suggests that there is no severe autocorrelation among error terms.

4.3.2. Correlation Analysis

Pearson Correlation/ Correlation Coefficient (r) measure how well the regression equation truly represents the set of data. The quantity r , called the linear correlation coefficient, measures the strength and the direction of a linear relationship between two variables. The value of r is such that $-1 < r < +1$. The $+$ and $-$ signs are used for positive linear correlations and negative linear correlations, respectively. Positive correlation: If x and y have a strong positive linear correlation, r is close to $+1$. An r value of exactly $+1$ indicates a perfect positive fit.

Positive values indicate a relationship between x and y variables such that as values for x increase, values for y also increase. Negative correlation: If x and y have a strong negative linear correlation, r is close to -1 . An r value of exactly -1 indicates a perfect negative fit. Negative values indicate a relationship between x and y such that as values for x increase, values for y decrease. No correlation: If there is no linear correlation or a weak linear correlation, r is close to zero. A value near zero means that there is a random, nonlinear relationship between the two variables.

The correlation factors in table 4.8.1 indicate that all are above zero and below one. This in turn indicates that there is linear correlation between independent variables and the dependent variable.

Table 4.3.1. Pearson Correlation Matrix

		IAE	AQ	AC	MS	IIA	AIAC
IAE	Pearson Correlation	1					
	Sig. (2-tailed)						
AQ	Pearson Correlation	.477**	1				
	Sig. (2-tailed)	.002					
AC	Pearson Correlation	.668**	.402*	1			
	Sig. (2-tailed)	.000	.012				
MS	Pearson Correlation	.369*	.514**	.425**	1		
	Sig. (2-tailed)	.023	.001	.008			
IIA	Pearson Correlation	.410*	.326*	.359*	.410*	1	
	Sig. (2-tailed)	.011	.046	.027	.010		
AIAC	Pearson Correlation	.715**	.505**	.708**	.355*	.392*	1
	Sig. (2-tailed)	.000	.001	.000	.029	.015	

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

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

c. Listwise N=38

Source: Survey data (2016)

As it's shown in the above table the Pearson correlation coefficient indicate that there is a positive significant relationship between the dependent Variable (IAE) and all independent variables (AQ,AC,MS,IIA and AIAC). As of the relationships between the dependent variables (IAE) and independent variables (AQ,AC,MS,IIA and AIAC), findings are significant. In addition to this there were strong correlations between the dependent variable internal audit effectiveness (IAE) and independent variables AQ (r = 0.477), AC (r= 0.668), MS (r = 0.369),IIA (r = 0.410) AIAC (r = 0.715) with (P<0.01) level of significant. This mean that all independent variables are positively affect internal audit effectiveness therefore, Ethiopian road authority should work on all independent variables to utilize the most from internal audit effectiveness.

4.4. Regression Analysis

A liner regression analysis were done by putting Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter as an independent variable and by making internal audit effectiveness as a dependent variable. The goal of this study was to know the level to which internal audit effectiveness is affected by Audit Quality, Auditors competency, Top Management Support, Independence of internal audit and Approved Internal Audit Charter by considering R square value, beta coefficient and P – value for the significant of the relation.

It can be mathematically represented as follow;

$$Y=a+B1x1+B2x2+B3x3+B4x4+B5x5$$

Where;

Y=Internal Audit Effectiveness

X1=Audit Quality

X2=Auditors competency

X3= Top Management Support

X4= Independence of internal audit

X5= Approved Internal Audit Charter

4.4.1. Assessment of Ordinary Least Square Assumptions

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 or If the **Sig.** value of the Shapiro-Wilk Test is greater than 0.05, the data is normal. If it is below 0.05, the data significantly deviate from a normal distribution. Accordingly, the result of test showed in table 4.5.1 below that all variables were found to be normal and the presence of normality was accepted at $p > 0.05$.

Table 4.4.1 Assessment of Normality

Tests of Normality

Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Internal Audit Effectiveness	.121	38	.173	.927	38	.116
Audit Quality	.121	38	.175	.943	38	.084
Auditor Competency	.121	38	.172	.917	38	.208
Managements Support	.138	38	.067	.936	38	.130
Independence of Internal Audit:	.132	38	.092	.972	38	.444
Approved Internal Audit Chart	.166	38	.081	.930	38	.120

a. Lilliefors Significance Correction

Source: Survey data (2016)

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 4.6.1 below and p value (= 0.75941) for the model is greater than 0.05 the critical value, shows homogeneity of variance across the model.

Table 4.4.2. Test of Heteroskedasticity

. estathottest
Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity
Ho: Constant variance
Variables: fitted values of IAE
chi ² = 0.1800
Prob> chi ² = 0.75941

Source: Survey data (2016)

4.4.3. Assessment of Multicollinearity

In order to identify the unique contribution of each variable in predicting the dependent variables a multicollinearity analysis was done. Multicollinearity exists when 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. However, table 4.7.1. Shows that there is no multicollinearity between different variables.

Table 4.4.3. Collinearity Statistics

Variables	Collinearity Statistics	
	Tolerance	VIF
Audit Quality	.615	1.627
Audit Competency	.463	2.160
Management support	.631	1.585
Independent of Internal Audit	.759	1.317
Approved Internal Audit Chart	.427	2.344

Source: Survey data (2016)

4.4.4. Regression Analysis Result

Table 4.4.4 Model Summary

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	.766 ^a	.587	.522	.59018	.587	9.095	5	32	.000	1.827

a. Predictors: (Constant), AIAC, MS, IIA, AQ, AC

b. Dependent Variable: IAE

Source: Survey data (2016)

As shown in the above table the overall independent variables to the internal audit effectiveness accounts for 58.7% of the variation in the internal audit effectiveness, which is very acceptable on social science studies therefore, we can conclude that the model is best fit and significant at $P=0.000$ and $F=9.095$ which implies that there were strong relationship between the predictors and the outcomes of the regression variable.

Table 4.4.5 Regression result

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t – value	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.223	4.997		3.226	.009		
AQ	.159	.187	.223	2.849	.006	.615	1.627
AC	.154	.253	.300	3.797	.001	.463	2.160
MS	.218	.289	.299	1.062	.005	.631	1.585
IIA	.186	.224	.109	3.833	.011	.759	1.317
AIAC	.292	.212	.401	2.304	.002	.427	2.344

a. Dependent Variable: IAE

Source: Survey data (2016)

The beta (β) sign shows the positive impact of the independent variables over the dependent variable. As shown in the above table the beta sign of all independent variables shows there is a positive effect of independent variables over the dependent variables which is internal audit effectiveness; meaning any increases on the independent variables results an increase on the dependent variables. This finding is consistent with most of the previous studies that are identified in this paper (Shewamene Hailmariam (2014),Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone, 2009; Al-Twaijry et al. 2004).

As it is clearly shown in the above table the beta and P value of Audit Quality is $\beta = 0.223$, $P < 0.05$ from this we can infer that there is a positives and significant relationship between Audit quality and internal audit effectiveness but this finding is inconsistent with the work of Barac and Van Staden (2009) as their study revealed that there is no positive relationship between audit quality and internal audit effectiveness. However the finding of this study is consistent with the finding of Mihret and Yismaw (2007) Cohen and Sayag (2010) Alzeban

and Gwilliam (2014). Therefore the null hypothesis one (H10: There is no positive relationship between Audit quality and internal audit effectiveness) is rejected.

The quality of internal audit work will play significant positive impact on internal audit effectiveness because when managers and users section believed on the quality of internal audit they will see audit work as a strategic point for organization this will increase the support given by managements to increase the amount of budget assigned to internal audit and professional related training given to empower internal audit staffs, final these action will improve internal audit effectiveness. Therefore, audit quality has a significant and positive effect on internal audit effectiveness.

The beta sign of auditor competency is $\beta = 0.300$, $P < 0.05$ shows that having a competent internal audit staff significantly and positively impacted the internal audit effectiveness. This finding is against the finding of some previous studies (Arena and Azzone, 2009; Cohen and Sayag, 2010) but it is consistent with the finding of Shewamene Hailemariam, (2014) which was done on public sectors. Because being competent and having the required competency to conduct internal audit work is essential to improve the effectiveness of internal audit this is because competent and skill full employees can perform their activities on time and they can use new technologies and software which enhance internal audit effectiveness. Therefore, competent internal audit staffs can positively impacted the audit effectiveness by delivering quality audit work at the required time by using different computerized tools thus the null hypothesis 2 (H20: There is no positive relationship between auditor's competency and internal audit effectiveness) is rejected.

In order to see the effect of management support on the internal audit effectiveness a regression analysis was done and its output shows a beta value of $\beta = 0.299$, $P < 0.05$; from this figure we can conclude that the internal audit effectiveness is directly and significantly impacted by the support the audit team received from the management. Therefore, null hypothesis H30 (There is no positive relationship between top management support and internal audit effectiveness) is rejected. This 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. It is the management who shapes the organization strategic move and if they see internal audit as a strategic point for the organization they will provide all the necessary input for the successful

accomplishment of internal audit. The management can 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 effectiveness of the internal audit work.

The other independent variable which was taken in this study as a determinant of internal audit effectiveness is the independence of internal audit staffs. As clearly shown in the above table the beta value of independence of internal audit variable is $\beta = 0.109$, with a significant P value of < 0.05 , from this we can infer that the Independence of internal audit is positively and significantly impacted the effectiveness of internal audit effectiveness therefore, the null hypothesis 4 (H40: There is no positive relationship between Independence of internal audit and internal audit effectiveness) is rejected. This finding is consistent with the work of (Cohen, & Sayag, 2010; Van Peursem, 2005). Independence of internal audit staffs is essential for the effectiveness of internal audit because if internal audit staffs are free to make their work unbiased and fraud will be minimized and they can do their work professionally as a result the effectiveness of internal audit will be high.

The last variable which was taken as a determinant of internal audit effectiveness on this study is the existence of approved internal audit charter which guides the internal audit works. On different literatures having a well-organized internal audit charter was taken as a prerequisite for the effectiveness of internal audit work basing this the last hypothesis of this study formulated as there is a significant and positive relationship between having approved internal audit charter and internal audit effectiveness and the Beta value ($\beta = 0.401$, $P < 0.05$) of the regression analysis support this hypothesis. Therefore, the null hypothesis 5 (H50: There is no positive relationship between having approved internal audit charter and internal audit effectiveness) is rejected. This finding is consistent with the findings of (Peursem, 2005; O'Regan, 2002 and Shewamene Hailemariam, 2014) similarly, the MoFED (2004) directs all public sectors to have an approved internal audit charters that would be used as a working manual considering its positive impact on the effectiveness of internal audit.

4.5. Summary of Hypothesis Test

The following table shows hypothesis of the study, method used to test the hypothesis and its outcomes.

Hypothesis	Description	Analysis Method	Remark
H1 ₀	There is no positive relationship between Audit quality and internal audit effectiveness.	Regression	Rejected
H2 ₀	There is no positive relationship between auditor's competency and internal audit effectiveness.	Regression	Rejected
H3 ₀	There is no positive relationship between top management support and internal audit effectiveness.	Regression	Rejected
H4 ₀	There is no positive relationship between Independence of internal audit and internal audit effectiveness.	Regression	Rejected
H5 ₀	There is no positive relationship between having approved internal audit charter and internal audit effectiveness.	Regression	Rejected

Chapter Five

5. Summery, Conclusion and Recommendation

This chapter mainly contains major finding of the study, Conclusion, recommendation and limitation and implications for further research.

5.1. Major Findings and Conclusions

5.1.1. Major Findings

Overall from the results, respondents in general appear to be positive about the set of parameters which are examined in relation to the internal audit quality, the competence of internal audit team, the management support, the independence of internal audit and approved internal audit chart. Comparing the results of the study with previous literature, it can be generally argued that all of the five examined factors (internal audit quality, competence of internal audit team, management support, independence of internal audit and approved internal audit chart) proved to be associated with internal audit effectiveness.

Therefore, the organization should give emphasis to use these determinant variables to make their service delivery effective, efficient and economical throughout their offices.

This study finds that the composite measure of audit quality, the competence of internal audit team, the management support, the independence of internal audit and approved internal audit chart accounts for 58.7% ($R^2 = 0.587$) variance for the IA effectiveness in identifying noncompliance activities and added contributions to the organization. That means, the impact of these five independent variables contributed for the dependent variable IAE were 58.7%, and the remaining 41.3% were other variables that are not included in this study.

5.2. Conclusion

Organizations with effective and efficient internal audit function are able to detect fraud more than those that have not such a function within their organizations. Internal audit role is not only to perform ordinary assurance activities, but also to serve as a strategic partner of the organization and add value to its activities towards improving organizational processes and ensuring their effectiveness and efficiency.

Effective internal audit function could be a major asset for improving public confidence in financial reporting and corporate governance. By taking this aspect into consideration, this study was identified factors that determine the IA effectiveness in Ethiopian Roads authority. Hypotheses were developed and tested using regression analysis and from the finding the following conclusions were drawn.

- The Internal Audit effectiveness of the organization increases, when there were the existence of Audit quality, competency of internal auditors, more supports from the management, have independence of internal audit combined with the availability of approved IA charters.
- The regression analysis shows very strong contributions of existence of Audit quality, competent internal auditors, management support, have independence of internal audit combined with the availability of approved IA charters for the IAE. Therefore, the overall effect of this variable is very important for the internal audit effectiveness of the Roads Authority.
- In addition, the correlation analysis shows all the independent variables have direct effect on the internal audit effectiveness (IAE) and the regression result also depicts all the independent variables have a positive sign of coefficients with internal audit effectiveness in Ethiopian road authority.
- The existence of audit quality, competency of internal auditors, management support, and independence of internal auditors and the availability of approved IA charter in the Roads sector is very important for the IAE in the Ethiopian road authority, because they have a positive sign of beta and contribute for the 58.7% of the variances for the IAE.

5.1.3. Recommendations

Based on the analysis and subsequent findings from the study, the following recommendations are forwarded.

- The finding of this research proved that existence of Audit quality, competent internal auditors, more supports from the management, have independence of internal audit combined with the availability of approved IA charters were statistically significant and positively related with the IAE in Ethiopian road authority. Therefore, Ethiopian road authority management should considered this variable as a pillar for internal audit effectiveness and they are expected to ensure their effective implementation.
- The other main finding of this study is that Ethiopian road authority internal audit staff does not have full and free access to information and data on the organization. This is one of the major obstacles for internal audit work to be effective thus the management of Ethiopian road authority should grant unrestricted access to data and information to internal audit staff and they should take measure on those who hides information from internal audit work.
- As it is clearly articulated in the finding of this study auditor's competency have a positive and significant effect on internal audit effectiveness, but in Ethiopian road authority internal auditors didn't take a sufficient and continuous professional development activities (such as professional association sponsored programs and correspondence courses). Therefore, the organization should work to enhance the professional competency of its internal audit staff by letting them to participate on short term and long term audit related training like, Financial Audit, Operational Audit, Information Systems (IS) Audit etc ...
- Finally future study could be undertaken to explore the perception of other parties such as external auditors on the internal audit's effectiveness. Also other independent variables could be modeled.

5.3 Limitation and Implications for further research

- The main limitations of this study were constraints of resource and time as a result of this, the study considered only selected independent variable which are Audit quality, competency of internal auditors, management support, independence of internal audit and approved IA charters. Another major limitation of this study was related to the sample of the study because sample was taken only from Ethiopian Roads Authority. Therefore additional researches should be done by taking samples drawn from differ road construction company.

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Appendix A: Questionnaires

Saint Mary's University

School of Graduate Studies

Department of Accounting and Finance (MBA)

Dear Participant:

The objective of this questionnaire is to collect information that will help to assess the determinants of Internal Audit effectiveness in Ethiopian Roads Authority. This study is conducted for the partial fulfillment of Master's Degree in accounting and finance. The results of the study are expected to contribute to identify the determinants of internal audit effectiveness. 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, which is merely for educational purpose.

Therefore, I kindly requested you to respond the questions with freely and to the best of your knowledge. Please, do not write your name on the questionnaire.

Thank you in advance for your support and participation.

With best regards!

Part I. The personal profiles:

General Instruction: Please indicate your choice by selecting from the options provided.

1. Sex/Gender/:

A. Male

B. Female

2. Age (in year):

A. 20 to 29

B. 30 to 39

C. 40 to 49

D. 50 and above

3. Level of education:

A. TVET certificate

B. Diploma

C. Bachelor's Degree

B. Master's Degree and above

4. Number of service years _____

Part II. The questionnaire items (questions)

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

Please note that the value of the scale stands as follow: **5= strongly agree, 4= Agree, 3= Neutral, 2= Disagree, 1= strongly disagree.**

S/N	The effectiveness of internal auditors’ in identifying noncompliance activities and added contributions to the organization success	Scales				
		5	4	3	2	1
1	The existing role that the internal audit is playing sufficient enough to address the very purpose for which it is established					
2	The organization internal audit ensures activity performed is compliance with established policies, procedures, laws and regulations.					
3	Internal audit activity influences positive change and continuous improvement to business processes, bottom line results and accountability within the organization					
4	Internal audit activity promotes appropriate ethics and values within the Organization					
5	The Organization Internal Audit finding & recommendations are critical & constructive to improve non-compliances activities or control systems of the organization					
6	The non-compliance reports provided by internal audit are reliable and significant to the organization.					
7	The number of complaints (doubts) about the internal audit finding (report) is very low because the report is correct and reasonable.					
8	Internal audit ensures the economical, effective and efficient use of the organization resources.					
9	Internal auditors of the organization are capable to carrying out internal control function under current corporate governance rules					

S/N	Audit Quality	Scales				
		5	4	3	2	1
10	The annual audit plan is determined completely by the internal auditor.					
11	Auditing is conducted on areas which are very significant to the organization.					
12	The internal audit is able to cover all organizational units and all issues.					
13	The responses from parties which are being audited are submitted in written form and their response is relevant and comprehensive.					
14	There is regular follow-up by the internal audit staff to examine actions taken to correct the problems found.					
15	The internal auditor also performs other activities such as developing procedures and conducting economic and financial audits.					
	Auditors competency					
16	Internal auditors possess sufficient experience to understand the organization's systems.					
17	The internal audit staffs have the appropriate and relevant education in auditing that allows them to audit all of the organization's systems (financial, operational, logistical and computerized).					
18	Internal auditors undertake continuous professional development activities (such as professional association sponsored programs and correspondence courses)					
19	The internal audit staff number & their skill match the scope of organization internal operations.					
20	The work of internal audit is performed with modern technology that uses computerized data tools and specific IA software					

	The Management Support					
21	Top level management trusts and values the advice of the internal audit service					
22	The internal audit service is seen as a key strategic partner throughout the organization					
23	Senior managers understand and fully support the work of internal audit					
24	Internal auditors have full access to records and information they need in conducting audits					
25	Internal audit obtains a sufficient budget to successfully carry out its Duties					
	Independence of internal audit					
26	I freely decide the scope, time and extent of auditing procedures based on auditing standards and the organization policy.					
27	The internal auditing operates totally independently, can audit any issue it considers in need of auditing.					
28	I perform the auditing activities without any interference from anybody and without any influence from the organization.					
29	The internal audit staff has free access to information and data about the organization, and unrestricted access to its site					
30	The organization encourages me to implement my recommendations, to promote value-added activities and to strength internal audit function.					

	The approved internal audit charter					
31	An internal audit Charter defines the purpose, authority and responsibility, within the organization, consistent with the Definition of Internal Auditing, the code of ethics and the Standards					
32	The Charter defines the nature and scope of the assurance and consulting services provided to the organization (including any assurances provided to parties outside of the organization) is such that it can provide independent and objective assurance.					
33	The Charter clearly defines internal audit's role in evaluating and contributing to the development of risk management, control and governance processes Internal audit's role in relation to any fraud-related					
34	The purpose and authority of internal audit charter is in line with "Standards for the Professional Practice" formulated by the Institute of Internal Auditors					

Appendix b: Reliability Statistics for Variables

I. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.837	.896	34

II. Assessment of Ordinary Least Square Assumptions

Tests of Normality

Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Internal Audit Effectiveness	.121	38	.173	.927	38	.116
Audit Quality	.121	38	.175	.943	38	.084
Auditor Competency	.121	38	.172	.917	38	.208
Managements Support of Independence of Internal Audit:	.138	38	.067	.936	38	.130
Approved Internal Audit Chart	.166	38	.081	.930	38	.120

a. Lilliefors Significance Correction

Source: Survey data (2016)

III. Assessment of Heteroskedasticity

Test of Heteroskedasticity

. estathottest
Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity
Ho: Constant variance
Variables: fitted values of IAE
$\chi^2 = 0.1800$
Prob > $\chi^2 = 0.75941$

IV. Assessment of Multicollinearity

Collinearity Statistics

Variables	Collinearity Statistics	
	Tolerance	VIF
Audit Quality	.615	1.627
Audit Competency	.463	2.160
Management support	.631	1.585
Independent of Internal Audit	.759	1.317
Approved Internal Audit Chart	.427	2.344

V. Pearson Correlation Matrix

		IAE	AQ	AC	MS	IIA	AIAC
IAE	Pearson Correlation	1					
	Sig. (2-tailed)						
AQ	Pearson Correlation	.477**	1				
	Sig. (2-tailed)	.002					
AC	Pearson Correlation	.668**	.402*	1			
	Sig. (2-tailed)	.000	.012				
MS	Pearson Correlation	.369*	.514**	.425**	1		
	Sig. (2-tailed)	.023	.001	.008			
IIA	Pearson Correlation	.410*	.326*	.359*	.410*	1	
	Sig. (2-tailed)	.011	.046	.027	.010		
AIAC	Pearson Correlation	.715**	.505**	.708**	.355*	.392*	1
	Sig. (2-tailed)	.000	.001	.000	.029	.015	

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

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

c. Listwise N=38

VI. Regression Results for Internal Audit Effectiveness

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	.766 ^a	.587	.522	.59018	.587	9.095	5	32	.000	1.827

a. Predictors: (Constant), AIAC, MS, IIA, AQ, AC

b. Dependent Variable: IAE

VII. Regression result

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t – value	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.223	4.997		3.226	.009		
AQ	.159	.187	.223	2.849	.006	.615	1.627
AC	.154	.253	.300	3.797	.001	.463	2.160
MS	.218	.289	.299	1.062	.005	.631	1.585
IIA	.186	.224	.109	3.833	.011	.759	1.317
AIAC	.292	.212	.401	2.304	.002	.427	2.344

a. Dependent Variable: IAE

Appendix C: Frequency Table

1. Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	32	53.3	84.2
	Female	6	10.0	15.8
	Total	38	63.3	100.0

2. Age (in year)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-09	3	5.0	7.9
	30-39	11	18.3	28.9
	40-49	12	20.0	31.6
	50 above	12	20.0	31.6
	Total	38	63.3	100.0

3. Level of education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's Degree	30	50.0	78.9
	Master s Degree and above	8	13.3	21.1
	Total	38	63.3	100.0

4. Number of services year

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	5	8.3	13.2
	6-10	9	15.0	23.7
	11-15	14	23.3	36.8
	15 above	10	16.7	26.3
	Total	38	63.3	100.0

5. Internal audit Effectiveness

	Frequency	Percent	Valid Percent	Cumulative Percent
1.56	1	1.7	2.6	2.6
1.67	1	1.7	2.6	5.3
2.00	4	6.7	10.5	15.8
2.22	3	5.0	7.9	23.7
2.44	2	3.3	5.3	28.9
2.67	2	3.3	5.3	34.2
3.11	5	8.3	13.2	47.4
3.33	2	3.3	5.3	52.6
Valid 3.44	3	5.0	7.9	60.5
3.56	1	1.7	2.6	63.2
3.67	1	1.7	2.6	65.8
3.78	2	3.3	5.3	71.1
4.00	2	3.3	5.3	76.3
4.11	4	6.7	10.5	86.8
4.22	4	6.7	10.5	97.4
4.44	1	1.7	2.6	100.0
Total	38	63.3	100.0	

6. Audit Quality

	Frequency	Percent	Valid Percent	Cumulative Percent
1.67	1	1.7	2.6	2.6
2.33	2	3.3	5.3	7.9
2.50	2	3.3	5.3	13.2
2.83	1	1.7	2.6	15.8
3.00	1	1.7	2.6	18.4
3.17	4	6.7	10.5	28.9
3.33	7	11.7	18.4	47.4
Valid 3.50	3	5.0	7.9	55.3
3.67	1	1.7	2.6	57.9
3.83	4	6.7	10.5	68.4
4.00	4	6.7	10.5	78.9
4.17	2	3.3	5.3	84.2
4.33	5	8.3	13.2	97.4
4.50	1	1.7	2.6	100.0
Total	38	63.3	100.0	

7. Auditor's Competency

	Frequency	Percent	Valid Percent	Cumulative Percent
2.00	1	1.7	2.6	2.6
2.20	1	1.7	2.6	5.3
2.80	2	3.3	5.3	10.5
3.00	2	3.3	5.3	15.8
3.20	4	6.7	10.5	26.3
3.40	5	8.3	13.2	39.5
3.60	5	8.3	13.2	52.6
3.80	6	10.0	15.8	68.4
4.00	2	3.3	5.3	73.7
4.20	9	15.0	23.7	97.4
4.40	1	1.7	2.6	100.0
Total	38	63.3	100.0	

8. Management Support

	Frequency	Percent	Valid Percent	Cumulative Percent
3.20	3	5.0	7.9	7.9
3.40	1	1.7	2.6	10.5
3.60	7	11.7	18.4	28.9
3.80	7	11.7	18.4	47.4
4.00	4	6.7	10.5	57.9
4.20	5	8.3	13.2	71.1
4.40	6	10.0	15.8	86.8
4.60	5	8.3	13.2	100.0
Total	38	63.3	100.0	

9. Independent of Internal Auditors

	Frequency	Percent	Valid Percent	Cumulative Percent
2.40	1	1.7	2.6	2.6
2.80	2	3.3	5.3	7.9
3.00	7	11.7	18.4	26.3
3.20	3	5.0	7.9	34.2
3.40	8	13.3	21.1	55.3
3.60	3	5.0	7.9	63.2
3.80	6	10.0	15.8	78.9
4.00	4	6.7	10.5	89.5
4.20	1	1.7	2.6	92.1
4.40	2	3.3	5.3	97.4
4.60	1	1.7	2.6	100.0
Total	38	63.3	100.0	

10. Approved Internal Audit Charter

	Frequency	Percent	Valid Percent	Cumulative Percent
1.25	1	1.7	2.6	2.6
2.00	1	1.7	2.6	5.3
2.25	2	3.3	5.3	10.5
2.50	1	1.7	2.6	13.2
2.75	2	3.3	5.3	18.4
3.00	3	5.0	7.9	26.3
3.25	10	16.7	26.3	52.6
3.50	3	5.0	7.9	60.5
3.75	3	5.0	7.9	68.4
4.00	8	13.3	21.1	89.5
4.25	3	5.0	7.9	97.4
4.50	1	1.7	2.6	100.0
Total	38	63.3	100.0	

