



**ST. MARY'S UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**THE EFFECT OF INTERNAL AUDIT QUALITY ON ORGANIZATIONAL  
PERFORMANCE IN THE CASE OF ETHIOPIAN ROADS AUTHORITY**

**BY**

**ESET FISSEHA**

**ADVISOR**

**MOHAMED SEID (ASSISTANT PROF.)**

**JUNE, 2021**

**ADDIS ABABA**

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**ATHESIS SUBMITTED TO ST.MARY'S UNIVERSITY COLLEGE,  
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**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**FACULTY OF BUSINESS**

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**ESET FISSEHA**

**APPROVED BY BOARD OF EXAMINERS**

_____	_____
<b>Dean, Graduate Studies</b>	<b>Signature</b>
<b><u>MOHAMED SEID (Assistance Prof.)</u></b>	_____
<b>Advisor</b>	<b>Signature</b>
_____	_____
<b>External Examiner</b>	<b>Signature</b>
_____	_____
<b>Internal Examiner</b>	<b>Signature</b>

## DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of my advisor. 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 Masters.

Eset Fisseha

St. Mary's University College, Addis Ababa

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Signature

JUNE, 2021

## **STATEMENT OF CERTIFICATION**

This is to certify that the thesis presented by Eset Fisseha entitled: “The Effect of Internal Audit Quality on Organizational Performance in the case of Ethiopian Roads Authority” in Partial fulfillment of the requirement for degree of MBA in Accounting and Finance fulfills with the regulation of university and meets the accepted standards with respects to originality and quality.

Name: Mohammod Seid (Asst. Professor)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

St. Mary’s University, Addis Ababa

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## ACRONYMS

ERA	Ethiopian road authority
IA	Internal audit
CIA	Competence of internal auditor
IIAT	Independence of internal auditor team
AIAM	Approved internal audit manual
MS	Management support
OP	Organizational performance

## ABSTRACT

*The objective of this study was to investigate the effect internal audit quality on organizational performance in Ethiopian Roads Authority. The researcher uses quantitative approach from primary source with a total of 145 employees participated in the study and the data's were analyzed using descriptive and multivariate analysis, specifically. The results show that competence of internal auditor, independence of internal auditor team, approved internal audit manual and management support all have a significant positive effect on organizational performance on Ethiopian road authority. The finding also shows independence of internal team auditors and competence of internal auditors are the most important internal audit quality variables to affect organizational performances. The creation organizational structure which makes the internal audit directorate more independent and planning and implementing training and development programs that improve competences of the employees are recommended.*

Key words: Internal audit quality, organizational performance

## **CHAPTER ONE: INTRODUCTION**

This introduction provides an insight into the research area and the reasons why this research deserves to be conducted. This chapter includes background of the study, a statement of the problem, general and specific objectives, research hypothesis and significance of the study, the scope of the study and organizations of the thesis.

### **1.1 Background of the Study**

Now days, more than ever, internal auditing is critical to strong corporate governance, risk management, effective internal control, and efficient operations. Internal auditors are seen to be moving away from traditional roles of bean counters and number cruncher to roles that have seen them become involved in almost every facet of organizations operations alongside the well documented role of post-implementation reviewer (Hirsh, 1989; Allott, 1996; ANAO, 1998). By providing this value-added approach, internal auditors are accepting a more proactive approach whilst remaining to assist management in the discharge of their responsibilities (Giselle, 2000).

As The Institute of internal auditing association (2020) states internal auditing is an independent, objective, assurance and consulting activity that adds value to and improves an organizations operation. 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. The Austin Chapter Research Committee (2011) states internal auditing Promotes organizational performance management and accountability through performing the annual risk assessment using the organizational structure, budget, and strategic plan, performance measures, and input from management and obtaining information on stakeholder concerns, new processes or programs, and reporting risks from management when preparing the audit plan.

So this research examines the effect of internal audit quality on organizational performance by using value added approach in Ethiopian road authority (ERA). ERA, which is one of the organizations under the Ministry of transport and accountable to the Board, is responsible for planning and formulating long and short term plans and programs for road construction,

design, maintenance of trunk and major link roads, as well as for administration of contracts. ERA, in managing the road sector program, is by far the biggest spender, accounting for about 20 percent of the national budget. The reason to select this organization is because the industry is consistently ranked as one of the most corrupt. Large payments to gain or alter contracts and circumvent regulations are common (Kenny, 2007), from 5% to 20% or even higher estimates of the percentage of road construction costs lost to bribe payments. Politicians and public officials can use large capital projects to obtain personal gain or win votes, instead of selecting projects on the basis of compliance with national and sector-level strategic plans (Jill Wells, 2015). As institution internal auditors (2019) also states sources of political pressure include, for example, election cycles, media attention, public interest and opinion, lobbying, politician's personal interests, and changes in political leadership and in the related administration and bureaucracy make it harder for internal auditors to do their jobs in public sector.

## **1.2 Statement of the Problem**

Construction is a \$1.7 trillion industry worldwide, amounting to between 5 and 7 percent of GDP in most countries. Governments have major roles as clients, regulators and owners of construction companies. As Macro Research Ethiopia (2020) states Roads constitute the largest federal government spending item in Ethiopia in 2020-2021 physical year, with Birr 58.8bn being allocated this year for a total of 284 new roads, 72 road rehabilitations, and 5 new bridges. This capital intensive nature of the sector makes it the target of politicians as the Studies by Liguori, M., Sicilia, M and Steccolini, I. (2012) points their high appreciation for cash-based budgeting and accrual-based accounting elements of the sector. Signing contracts for projects for which there was no apparent budget occurred in Tanzania when the roads agency TANROADS signed 22 major road contracts in the year prior to the 2010 election, 11 of the 18 projects that were examined in Zambia either had no approved budget or had issues over payment to the contractor. In Guatemala, 11 of 13 projects had similar problems (CoST 2011a).

The key problem for developing countries is also often seen as insufficient funding for construction of these much needed infrastructure projects. Yet at the same time governments, citizens, and donors are frequently dissatisfied with the outcomes of these projects, which

often involve the waste or misallocation of precious state resources. In a project in Ethiopia the engineers estimated project cost was almost 400% of the cost that had been estimated during the appraisal phase four years earlier, and this could not be attributed to inflation (CoST 2011a). The Tanzanian National Audit Office's (NAO's) investigation of 10 major roads completed between 2004 and 2007 revealed significant time and cost overruns (URT 2010). Globally, it has been estimated that corruption accounts for at least 10 percent of turnover in the construction sector, or well over US\$1 billion per day (ASCE, 2005).

However, recent studies also argue that IA does not sufficiently fulfill its governance oversight role (Leung et al. 2011) and thus stakeholders expectation of the IA function are significantly lowered (Chambers and Odar 2015). Audit quality in the U.S. has been subject to significant scrutiny in recent years. In 2007, the National Single Audit Sampling Project examined a sample of government audits and concluded that less than 50 percent of all audits are of acceptable quality; about 16% were labeled as having limited reliability while 36% were considered unacceptable (PCIE Report on National Single Audit Sampling Project, 2007).

In light of current economic events in the world, audit quality is become more relevant in countries especially those with significant amounts of debt (Charles C, Sonja P and Richard M, 2012). Roussy (2013) describes IA as “protector” and “helper” for the organization and the organization's management. As a protector it guards the management regarding risks, fraud cases or inefficiencies, and as a helper it supports the management by giving recommendations to improve organizational performance.

In the case of construction, there is also a strong justification for physical audits of project outcomes. Physical audits will provide significant circumstantial evidence of corruption as well as (perhaps more importantly) providing timely evidence of poor-quality construction that can be corrected at the cost of contractors. Once initial physical audits are complete, asset registries allow governments to track how constructed assets are used and maintained. Comprehensive physical audits will be particularly powerful if combined with financial audits undertaken by professionals with a background in the construction industry (Kenny, 2007).

A physical audit of a community driven development program that focused on road construction in Indonesia found that an estimated 24 percent of expenditures were lost in



materials theft, probably orchestrated by village heads who oversaw projects (Olken, 2004). To protect the public interest, every public sector entity requires independent audit activities providing a range of assurance and advisory services from financial attestation to performance and operational efficiency whether through the use of internal or external audit services or a combination of the two (IIA, 2012). Jiang et al. (2016) find that IAFs involvement in operations-related services has a significant positive association with operating performance. Furthermore, the authors separate the IAF activities into traditional areas (e.g. operational audit) and more business-oriented services (e.g., strategy consulting), and show that the assurance services in the traditional areas are prevalent in the IAFs whereas advisory and consulting services are less frequent. Strongly connected to this strand of the literature is the question how to appropriately measure the added value, and which determinants influence the value creation of IA.

Especially, since the value is not only characterized by the internal audit functions output (e.g., number of audits, findings, recommendations), but also by the character of tasks performed by the internal audit function (e.g., focus on assurance vs. consulting activities) or the role model (e.g., watchdog vs. trusted advisor (Anna Eulerich, Marc Eulerich, 2020). According to IIA the internal audit activity adds value to the organization (and its stakeholders) when it provides objective and relevant assurance, and contributes to the effectiveness and efficiency of governance, risk management, and control processes (IIA 2020).

Even if past researches study the determinant, practice of internal audit quality (Shewamen. H. 2014 Alemzewud A. 2019, Negash B. 2019. Samuel G. 2017, Solomon D.2019.) and factors on internal audit effectiveness (Wndosen S. 2019) in Ethiopia, There is no research which studies the effect of internal audit quality on organizational performance in public sectors where its performance not only measures on its financial performance. They also did not follow value added approach which focuses more on assurance and consulting. As Arena, M. and Azzone, G. (2009) suggested that in order to improve the internal audit value added service the internal audit functions could increase their involvement in activities which support risk management and provide recommendation to vital systems, procedures and processes.

So this research also covers respondents outside the traditional internal audit team that are very important for the overall physical and financial audit quality and assurance such as quality assurance and performance management team, engineering procurement director, good procurement team and cash collection, payment and financial analysis teams. In addition to this according to African development bank (2021) as of June 2020, total public debt was about 57% of GDP, slightly more than half of which was external. Since 2017, Ethiopia has been classified at high risk of public debt distress due to weak export performance coupled with increased import-intensive public infrastructure investments, which makes internal audit quality more critical in organization like Ethiopian road authority that is the biggest spender, accounts for about 20 percent of the national budget. Especially in this election cycle this increases the politicians and public official's focuses to use this large capital projects to obtain personal gain or win votes and increase to advance their politicians personal interests, and changes in political leadership and in the related administration and bureaucracy make it harder for internal auditors to do their jobs in public sector. So this research tries to examine the effect of internal audit quality on organizational performance in Ethiopian road authority.

### **1.3 Objective of the Study**

#### ***1.3.1 General objective of the study***

The general objective of this study is to assess the effect of internal audit quality on organizational performance in the case of Ethiopian Roads Authority.

#### ***1.3.2 The Specific Objective***

In line with the general objective of the following specific objectives is are specified

- To see the extent of internal audit quality Ethiopian Roads Authority.
- To examine the influence of competency of internal auditors on organizational performance in Ethiopian Roads Authority.
- To examine the influence of independence of internal audit team on organizational performance in Ethiopian Roads Authority.

- To examine the influence of the approved internal audit manual on organizational performance in Ethiopian Roads Authority.
- To examine the influence of management support of internal audit department on organizational performance in Ethiopian Roads Authority.

#### **1.4 Hypothesis of the Research**

**H1** Competency of internal auditors has positive effect on organizational performance in Ethiopian Roads Authority.

**H2** Independence of internal audit team has positive effect on organizational performance in Ethiopian Roads Authority.

**H3** The approved internal audit manuals have positive effect on organizational performance in Ethiopian Roads Authority.

**H4** Management support has positive effect on organizational performance in Ethiopian Roads Authority.

#### **1.5 Significance of the Study**

The study might contribute to the existing literature by examining internal audit quality and see its influence on performance by measuring it at organizational level by reviewing past studies which is conducted (see Shewamen. H. 2014, Alemzewud A. 2019, Negash B. 2019. Samuel G. 2017, Solomon D.2019 and Wndosen S. 2019). There is very limited research which studies the effect of internal audit quality on organizational performance in public sectors where its performance not only measures on its financial performance. Due to this lack of IA research and the fact that the limited previous IA research has focused mainly on developed countries.

This study provides empirical evidence from a developing country that may contribute additional insight to the literature and enhance understanding of the global configuration of the IA profession, particularly in Ethiopia where there has been relatively little research conducted regarding IA. In addition to this the authority might use this study finding to adjust

the competency of their internal auditors, independence of internal audit team, the approved internal audit manual and management support to improve the organizational performance. Lastly, the findings of this study could be helpful for individuals who want to conduct further studies in related to these topics and to other organizations that face similar problems.

### **1.6 Scope of the Study**

The research has geographic, time, financial and conceptual delimitation. Geographically the research is only conducted in Ethiopian Roads Authority. This research focuses in Ethiopian road authority because of: first, Ethiopian Roads Authority is the highest government organization in the sector. So the authority is where policies and procedures used for the technical support and regulatory service as well as human capital development is established. Second, the researcher believes that a representative sample could be drawn from this target population. The other major constraints are the financial capacity and time constraint on the researcher.

### **1.7 Organization of the Study**

The chapters of the thesis are organized as follows. Chapter one contains background of the study, statement of the problem, research objectives and research hypothesis. It also contains the significance of the research and Scope of the study. Chapter two contains a review of related literature on definition of internal audit and internal audit quality, theories and role of internal audit quality, the factors for effective internal audit quality in public sector, dimensions of internal audit quality, organizational performance, empirical review, chapter summery and research gap and finally theoretical frame work.

Chapter three describes the research methodology which includes research approach, research design, data collection instrument, target population, sampling technique and sample size, data analysis, validity and reliability and ethical consideration. Chapter four includes descriptive analysis, multivariate analysis, hypothesis testing discussion of the result and alignment to the study. Finally, chapter five includes a summary of the findings, conclusion of the study and recommendations.

## **CHAPTER TWO: LITERATURE REVIEW**

Chapter Two reviews the literature about the various definitions of internal quality, and organizational performance in order to find or propose suitable conceptual definitions for the study constructs. Moreover, an empirical evaluation of the previous studies is undertaken, to enhance understanding of the relationship between internal audit quality and organizational performance. Based on the analysis of previous studies, a conceptual framework is proposed to illustrate the relationship between internal audit quality and organizational performance.

### **2.1 Definition of Internal Auditing**

Internal audit is defined as an objective assurance with the aim to evaluate and improve the effectiveness of risk management, control and governance processes (IIA, 2010b). Assurance is also used by the international accounting body in tandem with auditing standards (IFAC, 2010). Although auditing standards are applicable for audits of financial information, the assurance standards are for other engagements. Internal audit has also been described as an independent appraisal of the effectiveness of internal control within an entity of its management process in achieving set objectives and goals (Gill & Cosserat, 1996). Very important element in public sector governance, as it supports the role of government oversight, insight and foresight (Goodson et al. 2012).

According to this source, internal audit is the key to good governance of public finances. There is no persuasive reason why the concept of internal auditing should not be broadened in practice. Perhaps the only limiting factors are the ability of an enterprise to afford so broad an audit, the difficulty of obtaining people who can do a broad type of audit, and the very practical consideration that individuals may not like to be reported upon. While persons responsible for accounts and for the safeguarding of company assets have learned to accept audit, those who are responsible for far more valuable things the execution of the plans, policies and procedures of a company have not so readily learned to accept the idea (Chambers, A.D., Selim, G.M. and Vinten, G.1988).

## **2.2 Internal Audit Quality**

The quality of the internal audit according to Moeller, (2011) is an internal investigation conducted regularly, and in the same manner as the internal audit others, by members of the internal audit staff to assess the quality of the audit work performed. While according to HiroTugiman (1997) that the internal audit or internal inspection is a function independent assessment of an organization to test and evaluate the activities of the organization are implemented. Internal Audit Quality also discusses aspects of the quality of a product, process or system according to Dennis R.Arter, (2003) the quality of audit can be designed specifically to determine whether the product meets the standards established by management. While Karla M. John, (2014) defines the quality of the audit can identify and a driver of audit quality as determined by the user of the financial reporting framework and the framework of quality audit.

## **2.3 The Role of Internal Audit**

Traditionally, the internal auditor has had significant responsibility for examining and reporting internally on the integrity of the firm's accounting and financial reporting systems (Kwon & Banks 2004). However, in recent years the literature indicates that the role of the IA function has changed in response to shifts in global business practices. Such changes created opportunities for IA to provide consulting services to management and assist boards of directors to manage risk (Mihret, James &Mula 2010). Hass, Abdolmohammadi and Burnaby (2006) reviewed the American IA literature and established that the literature indicates a paradigm shift in the activities performed by internal auditors. They state that IA in the USA has shifted its orientation to a value-adding one.

The study finds that the main message from the American IA literature is that the question of how IA activities create value in an organization is of critical importance. The authors highlight that before the enactment of the Sarbanes-Oxley Act (SOX) of 2002, IA services were focusing on detection rather than prevention. However, after the issuance of the Sarbanes-Oxley Act (2002), IA changed its emphasis to a compliance approach. In other words, the role of internal audit in corporate governance through its services to the board of directors has strengthened after the Sarbanes- Oxley Act (Mihret, James &Mula 2010).

A review of European IA literature by Allegrini, M, Paape, L, Melville, R & Sarens, G (2006) and a review of the Asia Pacific IA literature by Cooper, Leung and Wong (2006) generally confirm this paradigm shift. McNamee and McNamee (1995) also explain that the IA role has changed through three major stages. The first transformation of internal auditing began in the 1940s. In this phase the role of internal IA focused mainly on checking transaction and records. In the 1940s, the internal auditor was a partner in improving the business processes and creating greater wealth by continuously working with management to ensure policies and procedures were followed. Since the 1990s, IA has become a value adding service to organizations including assisting organizations in the management of risk by using sophisticated risk modeling, statistical sampling, computer assisted audit techniques, and focusing on total quality management as part of the audit process.

Thus, before the 1950s, IA activities focused on financial audit and, more specifically, were heavily involved in the review of financial audits. However, the IIAs Standards for Professional Practice of Internal Auditing (responsibilities of internal auditing) presently suggests a broad and all-encompassing role for IA:-The objective of internal auditing is to assist all members of management in the effective discharge of their responsibilities by furnishing them with analyses, appraisals, recommendations and pertinent comments concerning the activities reviewed. The internal auditor is concerned with any phase of business activity where he can be of service to management.

This involves going beyond accounting and financial records to obtain a full understanding of the operations under review (Institute of Internal Auditors 2000). Therefore, the Institute of Internal Auditors (2011) now defines internal auditing as: an independent, objective assurance and consulting activity designed to add value and improve an organizations operation. 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.

It can be argued that this definition highlights two important issues. The first one is that internal auditors should be independent. Secondly, internal auditing is an appraisal function for the organizations activities to help staff and management in performing their duties and ensuring adequate internal control. According to this definition also, internal auditors should

play a relevant role in evaluating and improving the effectiveness of the risk management process.

The definition also presents both assurance and consulting activities as key components of the IA function. Goodwin (2004) states that the new definition of internal auditing has shifted its focus on the IA function to add value by improving the operations of the organization and by evaluating and improving the effectiveness of the organizations risk management, control and governance processes. Therefore, the new definition of internal auditing has changed the role of internal auditors to a value added and consulting function to management. This statement also implicitly reflects the Marxist understanding of internal auditing, namely that modern operational auditing seeks to increase the rate of return on capital, that is, to value add (Yee et al. 2008).

IA is an independent appraisal activity within an organization for the review of accounting, financial and other operations of organizational structure as a value adding service (Al-Twajry, Brierley & Gwilliam 2003; Arena & Azzone 2009; Bou-Raad 2000; Coram, Ferguson & Moroney 2008; Enyue 1997; Goodwin 2004; Rupšys & Boguslauskas 2007; Sarens & De Beelde 2006; Yee et al. 2008). The main role of internal auditing is to add value to the organization by performing assurance and consulting activities. They need to be operational, tactical, strategic and improve operations.

However, the interpretation of this role is wide. Primary duties of assistance with risk management, control, and governance processes will add a different value to the organization. In reality, it is depending on the specific needs of organizations and the sector they are operating. Pickett (2010) notes that examples may be following: for organizations in the scandal-ridden industry value adding auditing service will be compliance reviews. For organizations in quickly growing sectors, value adding will be consulting advice on programs and projects. For organizations in developing countries it may be building controls and preventing fraud or corruption.

For global organizations it may be management of the risks and logistics of coordinating information with the head office and so on. Internal auditors can be considered as the Sentinels of the Board through their unique position. For example, they are an independent service and report directly to the board of directors, and have the right to access all information in every part of the organization.



Therefore, stakeholders will benefit from having a strong IAF which will provide value to the other cornerstones of corporate governance (De Smet & Mention 2010). Despite all this, in practice, internal auditors may be falling short and scholars express serious reservations regarding the effectiveness of the internal auditor's role (Van Peurse 2004). Therefore, in order for IA to be considered as a value adding service to organizations, it must be effective (Al-Twaijry, Brierley & Gwilliam 2003; Mihret, James & Mula 2010).

## **2.4 Theories of Internal Audit**

### Theoretical perspectives

Institutional theory (Barley & Tolbert 1997) and Marx's theory (Avineri 1970) recognize the importance of cultural and social determinations as a major influence on decision-making (Mihret, James & Mula 2010). With this understanding, this study employs a combination of institutional theory (DiMaggio & Powell 1983) and Marx's (1978) circuit of industrial capital. Mihret, James and Mula (2010) employ a combination of the two theories in a theoretical framework that is beginning to emerge in empirical research. These theories descended from political economics and, therefore, share similar foundations.

As such, they provide the basis for studying organizational phenomena embedded in broad social, political and economic settings (Deegan 2006; Mihret, James & Mula 2010). Therefore, institutional theory and Marx's theory enable an understanding of IA practices as a part of organizational systems and illuminate the link between IA and the achievement of organizational goals (Mihret, James & Mula 2010). According to Mihret, James & Mula (2010): The concept of institution as applied in institutional theory refers to an organizational field, which comprises several organizations or industries. Thus, it could be argued that while Marx's thinking on society focuses on changes in society at large, institutional theory concerns changes in parts of society as well.

### **2.4.1 Institutional Theory**

Institutional theory proposes that the survival of an organization depends not only on achieving production efficiency but also on its conformity to societal norms of acceptable

practice (DiMaggio & Powell 1983; Meyer & Rowan 1977). To illustrate conformity, DiMaggio and Powell (1983) identify three types of isomorphism: coercive, normative, and mimetic. DiMaggio and Powell (1983) and Meyer and Rowan (1977) both tried to answer the question: Institutional theory explains how organizational structures and practices are shaped through changes induced by institutional pressures. Institutional theorists consider organizations as members of an organizational field, which comprises several organizations or industries that are interrelated in some way.

This interrelation leads organizations to influence others (Mihret, James & Mula 2010). DiMaggio and Powell (1983) suggest that organizations in a structured field respond to an environment that consists of other organizations responding to their environment. As a result of institutional pressures and a desire to categorize themselves with other organizations in a similar environment, organizations tend to adopt similar characteristics. DiMaggio and Powell (1983) argue bureaucratization and other forms of homogenization emerge, out of the structuration (Giddens 1979) of organizational fields,. DiMaggio and Powell (1983) state: The structure of an organizational field cannot be determined a priori but must be defined on the basis of empirical investigation. Fields only exist to the extent that they are institutionally defined.

The process of institutional definition, or structuration consists of four parts: an increase in the extent of interaction among organizations in the field; the emergence of sharply defined inter organizational structures of domination and patterns of coalition; an increase in the information load with which organizations in a field must contend; and the development of a mutual awareness among participants in a set of organizations that they are involved in a common enterprise.

Isomorphic processes can increase internal organizational efficiency because organizations are rewarded for being similar to other organizations in their fields. This similarity can make it easier for organizations to transact with other organizations, to attract career-minded staff, to be acknowledged as legitimate and reputable, and to fit into administrative categories that define eligibility for public and private grants and contracts (DiMaggio & Powell 1983). In the context of establishing internal audit departments within organizations, coercive isomorphism relates to those pressures applied to establish internal audit departments (Al-Twajry, Brierley & Gwilliam 2003). Arena, Arnaboldi and Azzone (2006) indicate that

institutional theory provides a means of understanding the conforming and legitimating processes which affect the development of IA.

Normative isomorphism develops from increased proficiency within organizations, and it arises when institutional changes occur due to an organization's recognition of professions (DiMaggio & Powell 1983). DiMaggio and Powell (1983) state that two aspects of professionalization are important sources of isomorphism: firstly, the formal education and legitimation in a cognitive based course produced by university specialists; and, secondly, training programs produced by professional institutions. Therefore, universities and professional training institutions are important for the development of organizational norms among professional managers and their staff within organizations. Similarly, in internal auditing this proficiency comes about by internal auditors firstly undertaking courses in internal auditing at university level and then qualifying as a Certified Internal Auditor (CIA) or establishing a chapter of the IIA in their particular district. This has the potential to raise the profile of both IA and the IIA in that locality and increase the momentum for the diffusion of IA activity to similar establishments. A likely consequence of the resultant increased proficiency within companies is enhanced conformity to IIA standards (Al-Twajry, Brierley & Gwilliam 2003). With this perceived isomorphism the internal auditing activities would be established in line with the IA profession (in the form of the IIA) to illustrate the IIA's and internal auditor's proficiency and knowledge and how others can similarly benefit (Abbott 1988).

Fogarty (1996) writes that one of the prime characteristics of institutional theory is its ability to contrast genuine achievements of organizations against what their structures may suggest to the external environment should be achieved. However, organizations may exhibit to the external environment that they are operating in line with what is expected by the external environment when, in fact, this is not the case (Meyer & Rowan 1977). Institutional theory explains that organizations sometimes engage in decoupling, that is, actual organizational practice may differ from what the external facade of an organization suggests (Al-Twajry, Brierley & Gwilliam 2003). Subsequently, decoupling may occur when organizations display to the business world that they are operating in a perceived manner internally, when in the view of the external environment they are in fact falling short of those expectations (Meyer & Rowan 1977).

Institutional theory is considered suitable for IA research for various reasons. Firstly, the theory encompasses IA practices which are a part of organizational phenomena. Secondly, it helps to explain organizational phenomena without assuming a limited set of organizational goals unlike agency and transaction cost theories, which are both predicated on the assumption of shareholder wealth maximization. Thirdly, it could support audit research in developing countries where the equity market is underdeveloped (Mihret, James & Mula 2010). Prior research suggests that institutional theory has validity in IA research, both in developing countries (Al-Twajry, Brierley & Gwilliam 2003) and developed countries (Arena, Arnaboldi & Azzone 2006).

Furthermore, according to Mihret, James and Mula (2010, p. 228): Institutional theory has several implications relating to the possible context-dependence of IA effectiveness. For example, in organizations that are exposed to high risk, one might expect mimetic pressures to contribute to the development of IA. This is because organizations, as part of their efforts to manage risk, may establish internal audit departments by emulating practices of other organizations.

#### *2.4.2 Marx's Theory of the Circuit of Industrial Capital*

Karl Marx (1976; 1978; 1981) explains that capital is increased by continuous generation of surplus-value (profit). However, capitalism in Marx's view requires control of the valorization process: control of the process of production and the labour process, to maximize the rate of profit (Bryer 1994; Bryer 1995; Bryer 1999; Bryer 2006). The capitalist creates value by using capital to buy commodities and then transforming them to other commodities for sale at higher prices (Mihret, James & Mula 2010). This value is created in the production process. Most important to Marx's (1976) perspective is the labour theory of value.

As Marx (1976), indicates: we know however from what has gone before that the labour process may continue beyond the time necessary to reproduce and incorporate in the product a mere equivalent for the value of the labour power. For this, six hours alone would be sufficient: but the process lasts longer, say for twelve hours. The activity of labour power, therefore, not only reproduces its own value, but produces value over and above this. This surplus-value is the difference between the value of the product and the value of the elements

consumed in the formation of the product, in other words the means of production and the labour-power.

Therefore, the theory illuminates the concept of value which arguably is consistent with the new definition of internal auditing stated by the IIA that internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organizations operations (Institute of Internal Auditors 2011). Yee et al (2008) state that: the aim of operational auditing is to improve organizational efficiency and effectiveness through constructive criticism. The concept of constructive criticism ties in very well with the traditional Marxist values of growth and improvement through criticism and self-criticism propounded by twentieth-century Marxist scholars such as Louis Althusser.

According to Marxs perspective, the main force of production is the human being herself/himself including the different competencies in terms of knowledge and skills available (technology) to transform nature into commodities the social organization of production. IA is identified as a value adding service to organizations emerging out of labor process control. Therefore, from the perspective of Marxs theory, IA can be viewed as an important element of labor process control (Mihret, James &Mula 2010). For labour process theorists, IA is an integral part of the labour process control by which modern managers discharge their accountability to social capital for several reasons. Firstly, IA helps ensure the integrity of financial reports. Secondly, it helps ensure the accuracy of the reported rate of return on capital. Clearly, the work of IA is still not completely separate from accounting and external audit (Mihret, James & Mula 2010; Yee et al. 2008). As mentioned earlier, IA is of benefit to organizations in two ways: the first arises from the conventional audit of financial systems and controls which focus on the prevention and detection of irregularities either from mistakes or fraud; and the second is performance audit, which concerns the ongoing economy, efficiency and effectiveness of various aspects of the organization (Al-Twajjry, Brierley & Gwilliam 2003).

In addition, the key role of internal control systems lies in providing accountability of senior management to the capitalist; and management accounting serves to ensure accountability of workers to management via the chain of command (Bryer 2006). Furthermore, IA is an important tool in mitigation of wastage of capital by deterring fraud (Raghunandan & Mchugh 1994). This, in turn, leads to maximizing return on capital because owners of

businesses invest in machinery and systems of control to increase productivity to achieve their overriding aim of maximizing return on capital or, in Karl Marx's words, "the rate of profit" (Bryer 2006). Therefore, the auditor's role is the prevention of adverse consequences of failing to meet these requirements and objectives.

As Marx's theory purports, modern auditing aims to both safeguard and increase the rate of return on capital. Accordingly, the IA function from the perspective of Marx's theory is important to correct situations where the capital is wasted or devalued because of inefficiencies, fraud, corruption or the protection of favored relationships. As Yee et al. (2008) explain, the focus on agency theory by Western researchers has resulted in the unfortunate effect of focusing only on IA benefits for the organizations,, short term bottom-line.

By contrast, a Marxist classical economics perspective allows the research to consider the broader social benefits of IA. Yee et al. (2008) state that frequently a Marxist \_classical economic perspective allows us to consider the broader social benefits of IA, including raised living standards, a reduction in fraud and corruption, increased employment and alleviation of poverty. Therefore, as institutional theory, the Marxist perspective is more important for developing countries where competent IA services have the capacity to improve the rate of return on capital of business enterprises. This could in turn contribute to a reduction in corruption and the alleviation of poverty. It could also maximize employment levels and increase wage rates and production levels (Yee et al. 2008).

Based on the above discussion, IA is consistent with the traditional Marxist emphasis on improvement through criticism and self-criticism and the unhindered development of the productive forces (Mihret, James &Mula 2010; Yee et al. 2008). Lenin's famous formula that socialism equals electrification (forces of production) plus the soviet workers,, cells (relations of production) seems especially present here. IA effectiveness adds a value adding service to organizations and maximizes return to the organization. In other words, in order for IA to be considered a value adding service to organizations it must be effective (Al- Twaijry, Brierley & Gwilliam 2003; Institute of Internal Auditors 2011a; Mihret, James &Mula 2010. Mihret, James and Mula (2010) employ Marx's theory of the circuit of industrial capital to develop propositions on antecedents and organizational performance implications of IA effectiveness. Prior research also suggests the theory has validity in IA research in relation to both

developing countries (Mihret, James & Mula 2010) and developed countries (Yee et al. 2008).

## **2.5 Factors for Effective Internal Audit Function in Public Sector**

Hani K.(2011), there is five main pillars that are considered critical for building an effective internal audit function in the public sector. These are perception and ownership, improved processes and governance, legislative support, improved incentives and a commitment to change.

### **Perception and ownership**

A more professional internal audit function will be able to establish priorities for effective and efficient service delivery, assist management in decision-making and thus fill a more proactive and forward-looking role. The organization's leadership can set the tone by establishing governance, risk management and control systems and consistently applying sanctions in the case of non-compliance. Internal audit functions need to work on raising awareness of internal auditing in the public sector by establishing specific marketing plans. These plans, however, must be accompanied by improved internal audit service delivery and the introduction of a quality assurance program. The establishment of a professional body to communicate internal audit matters would raise awareness of the internal audit function and could also serve to sanction members who fail to meet professional standards.

### **Improved processes and governance**

There are several key elements essential to helping the internal audit function become more organized and better structure its processes.

- ❖ Annual audit coverage planning through risk assessment: as there is usually a host of audit assignments, different views and needs, management and the internal audit function need to establish priorities, based on a risk assessment, and obtain the audit committee's formal approval for the plan. To increase audit efficiency, internal auditors should concentrate on areas that carry the highest degree of risk. The ability to establish a reliable risk profile is crucial to audit effectiveness. The internal audit function also needs to consider which effectiveness/efficiency reviews ("value for money") would

improve the service delivery of the organization and thus could raise awareness of the added value of internal auditing.

- ❖ Assignment planning: auditors should develop an assignment planning memo by performing a preliminary review of the audit area and determining the assignment scope and objectives.
- ❖ Testing and reporting: establish, test, monitor and assess controls. The key finding of the audit and subsequent recommendations should be in harmony with the risk profile.

### **Legislative backbone**

Internal auditing in the public sector should be written into Law. The legislation should clearly set out the requirement for internal auditing and the appropriate governance arrangements to support effective internal auditing, such as an audit committee and its role and operations. In support of the aforementioned, there is also a need to fully integrate internal auditing into ongoing public finance management reforms. The head of internal auditing should be required to hold the appropriate professional designation (IIA member or CPA) with appropriate academic qualifications. The audit function should formally adopt The IIA's International Standards for the Professional Practice of Internal Auditing.

### **Improved incentives**

Civil service has been, and still is in some places, a lifetime occupation, where set advancement is based on the number of years in service, not merit, achievement, or education. Change is likely to be resisted by staff, if it will only mean additional work, without any possibility of merit-based advancement. Most public sector organizations, whether in developed or developing countries, cannot compete with private sector salaries. Non-financial motivators take on even greater importance in public sector environments and must be targeted to the individual.



## **Commitment to change**

Countries just beginning to make the change to value added internal auditing may benefit from studying the experiences of those that have recently made the transition. Crucial elements that should be examined include leadership ethics, government support, a proactive focus and staff development. Bringing about the necessary changes in culture, perception, or even internal audit services themselves demands a long-range commitment from leadership at the highest level. Strong, active leadership support to improve governance is the overwhelming prerequisite for successful reform of internal auditing in the public sector. For sustained change, internal cooperation is not enough. External stakeholders and policy- and decision-makers need to be supportive and must be kept aware of changes, reforms and improvements in internal auditing, so they will take into account the contributions internal auditing can offer.

## **2.6 Dimensions of Internal Audit Quality**

### ***2.6.1 Internal Auditor Competence***

According to Arens et.al (2014), the definition of competence is as follows: Competence is the knowledge and skills necessary to accomplish tasks that define an individual's job. Spencer (1993), states that competence is an underlying characteristic of individuals with regard to the criteria for effective performance in a job or situation. Furthermore, with other competencies described by Arens (2014) that competence is the knowledge and skills necessary to accomplish tasks that defines the work of individuals. The competence needed by an auditor different from the performance of the financial auditor and the auditor's performance particularly for education and training required for the performance of auditors, known as continuing professional education. In addition to a competent auditor, audit success is also influenced by an adequate audit management. Audit management includes planning, organizing, implementing, and performance auditing control at the level of audit institutions.

Besides, the auditor also must have high integrity and are required to have good communication skills, because in many audits conducted interviews and inquiries from the auditee to obtain data.

### *2.6.2 Internal Auditor Independence*

Independent is a viewpoint that is not biased and is composed of independent thought or fact and independence in appearance. Independent mind reflects the state of mind that allows the auditor to audit became impartiality. Independent mind still reflects the old terms of the truth of independent members. Independent in appearance are the results of independent interpretation of others (Arens, (2012). Further independent is an auditing standard are important because opinion independent accountants aims to increase the credibility of financial statements presented by management. The Independent is the freedom of significant interest that threatens objectivity. (Robert Moeller, 2005). Independent internal audit is a service appraisal impartial and objective in an organization, (Spira, L.F. and Page, M., 2003).

And independent were office workers accountants who conduct an examination of the procedures used in addition to recording the truth. AzharSusanto (2013). The 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, (Pickett, 2005). Further explanation of the auditor independence proposed by Boynton (2002) that independence is the basis of the auditing profession.

It means that the auditor would be neutral over the entity, and therefore will be objective and public can trust audit function because the auditor is impartial and acknowledges the obligation to be fair. Furthermore Picket (2010) declared the independence of the internal auditor is the freedom from conditions that threaten the ability of the internal audit activity or the chief audit to carry out internal audit responsibilities objectively. In line with the above statement TugimanHiro (2006) states that the independence of the internal auditor is a state free from situations that threaten objectivity both individually and in carrying out their duties.

### *2.6.3 Approved Internal Audit Standard*

Professional audit standards, such as the international professional practices framework (IPPF) promulgated by the IIA, support the implementation of the previous elements and

provide a framework to promote quality audit work that is systematic, objective, and based on evidence. Internal audit manual is defined by IIA as a formal written document that explains policies, procedures, laws & regulations as well as purpose, authority and responsibility.

The manual should be (a) establish the internal audit 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). Audit activities should conduct their work in accordance with recognized standards. Conformance with the standards is seen as a key factor for the internal audit activity to add value to the governance process. According to the result of study by conformance with the standards is seen as a key factor for the internal audit activity to add value to the governance process.

#### *2.6.4 Management Support*

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

According to Mihret (2010) management support to IA is identified as one of the factors that promise well for a good IA department profile. In addition, Zain, Subramaniam, & Stewart (2006) indicate that with the appropriate level and type of resources directed to the internal audit function, firms should subsequently reap the benefits in terms of the internal audit function aiding and supporting the external audit. Albercht, Howe, Schueler, & Stocks (1988) state that there are four factors that IA directors could develop to enhance IA effectiveness, namely, 1) top management support; 2) an appropriate corporate environment; 3) high quality internal audit staff; and 4) an appropriate corporate environment. The authors also highlight that the visible support of top management to the internal audit department may be the single most important factor that enhances IA effectiveness.

Furthermore, Sarens & De Beelde (2006) find that the overall acceptance and appreciation of IA within the company is strongly dependent upon the support it receives from senior management. They also find indications that this support is related to the maturity of the internal audit function. Therefore, internal audit actively seeks this support by promoting and communicating its potential to add value.

## **2.7 Organizational Performance**

Organizational performance has been used widely as the most important criterion in evaluating organizations. Organizational performance in a broader sense in which both financial and non-financial performance are included. (Venkatraman and Ramanujam, 1986). In general, the concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and resources, for the purpose of achieving a shared purpose (Alchian&Demsetz, 1972; Barney, 2001; Jensen &Meckling, 1976; Simon, 1976).

Those providing the assets will only commit them to the organization so long as they are satisfied with the value they receive in exchange, relative to alternative uses of the assets. As a consequence, the essence of performance is the creation of value. So long as the value created by the use of the contributed assets is equal to or greater than the value expected by those contributing the assets, the assets will continue to be made available to the organization and the organization will continue to exist.

Therefore, value creation, as defined by the resource provider, is the essential overall performance criteria for any organization. How that value is created is the essence of most empirical research in management. Performance is so common in management research that its structure and definition are rarely explicitly justified; instead, its appropriateness, in no matter what form, is unquestionably assumed (March & Sutton, 1997).

## **2.8 Empirical Review**

### ***2.8.1 The Relationship between Internal Auditors Competence and Organizational Performance***

The IAF quality measures of prior research have operationalized competence as experience, certification and training; objectivity as the IAFs reporting relationship (lines of

communication); and work performance as focus on financial reporting related activities. The competence is considered as experience and technical skills objectivity is considered by individual objectivity and lines of communication; work performance is considered by meeting stakeholder requirements internal auditors need to acquire a broad range of skills, for example, communication, interpersonal, knowledge of general business, and information technology and technical knowledge of auditing (Hass, Abdolmohammadi& Burnaby 2006; Mihret & Woldeyohannis 2008).

Gramling and Myers (1997) find that certification of internal auditors is perceived as an indicator of competence. According to Bierstaker, Burnaby and Thibodeau (2001, p. 160): Technology is already having a major impact on audit planning. For example, computers are used to generate client specific internal control templates to help identify strengths and weaknesses in a system. Furthermore, when internal auditors have professional proficiency such as adequate knowledge, professional membership, certification and training in electronic data processing systems, it would imply that they are competent to monitor the quality of the internal control system (Fadzil, Haron&Jantan 2005).

Kanbiro O, (2019) states the internal auditors technical competence has impacts on the performance of the organization and the audit staff needs to have competence in risk profiling in order to effectively run their activity by applying professional expertise that they have equipped. IA competency represents one of the most essential elements in determining IAQ which improve the auditors' role towards organizational performance.

The Institute of Internal Auditors (IIA) practice advisory state that IA should possess required knowledge, qualification, experience and other competencies for them to perform effectively. There is certainly a need to have and apply new ideas, approaches and techniques in order to improve and add value to organization (Buregeya, 2007). Wubishet&Dereje (2018) and Kirima, (2016) and Tesema (2018) also states competency of internal audit staff has positive and significant relationship with performance.

### ***2.8.2 The Relationship between Internal Auditors Independence and Organizational Performance***

The concept of independence is generally used to mean the ability of the auditor to be fair and objective in his/her review and appraisal and not to be under undue pressure from any party to the extent that this could bias his/her opinion. The IIA's Standards for Professional

Practice of Internal Auditing (glossary) defines independence of internal auditors as: the freedom from conditions that threaten objectivity or the appearance of objectivity. Such threats to objectivity must be managed at the individual auditor, engagement, functional, and organizational levels (Institute of Internal Auditors 2011b).

Suraj (2017) noted the independence of internal audit could enhance financial performance if the auditor is independent of the activities they evaluate and perform their duties objectively to avoid conflict of interest. The independence of internal audit department and the level of authority to which the internal audit staff report are the important criteria influencing the objectivity of its work, and added that organizational independence is more crucial to the effectiveness of the internal auditors, as it protects the auditor from pressure or intimidation, and increases the objectivity of the auditing work (Cohen & Sayag, 2010; Van Peurse, 2005; Boa-Read, 2000).

Greater quality of the auditing work and greater organizational independence were positively related to auditing quality and auditors evaluations. The correlations were stronger in the case of organizational independence. The independence of IA remains crucial in providing a better result to the organizations. Suleiman B, Ayoib A and Nor Y, (2018) established that independence of IA department affects the performance of Nigerian universities to a certain extent. The finding indicates that an internal audit department must be independent in terms of personnel and operational activities of an organization. of internal allows the audit activity to conduct work and be perceived to conduct work without interference by the entity under audit and independence is a key factor for the internal audit activity to add value.

According to research done by Kirima N. (2016), there is positive and significant relationship between internal audit independence and performance. The other research also evidenced that there is positive relationship between independency of internal audit and good governance in public sector (Shewamene Hailemariam, 2014). Independence of internal audit was also clearly evidenced that there is statistically significant and positive relationship between independency of internal audit and organizational performance in public sector (Kanbiro O, 2019).

### *2.8.3 The Relationship between Approved Internal Audit Manual and Organizational Performance.*

The internal audit activity conforms to some or all of the standards, verification of compliance with other standards or codes and verification of compliance with other standards or codes respectively, (Institute of Internal Auditors Research Foundation, 2014). In addition to this, an internal audit manual typically includes the responsibilities of internal auditors in broad terms, the standards to be followed by the internal auditors, and the relationship between the internal auditors & audit committee. As O'Regan D (2002) concluded, a well-drafted charter is an important ingredient of effective internal audit function.

It helps to direct the efforts Van Peursem, (2005) added that the presence of a strong manual 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 independence status of an IA. Furthermore, the existence of audit manual in organization influences senior management to follow the recommendations of internal auditor (Van Peursem, 2005) which in turn affects IA effectiveness.

### *2.8.4 The Relationship between Management Support and Organizational Performance*

The legitimacy of the audit activity and its mission should be understood and supported by a broad range of elected and appointed public sector officials, as well as by the media and involved citizens. This means the internal audit activity is credible within the organization. In the same way (Faudziah et al., 2005) find out that, management support of internal audit department has significant impact on internal audit quality in one hand and organizational performance in other hand. Abbu-Azza (2012) explains management support as a motivation provided by top management to internal auditors.

These motivations were explained by Abbu-Azza (2012) as providing education and training programs to IA teams; adequate budget to IAD; bonuses and recompense to IA teams, and acceptance and implementation of IA recommendations. Study conducted to examine the relationship of top management support and IA effectiveness (Ussahawaritchakit and Intakhan, 2011). On the study conducted by Alzeban and Sawan, (2013) on the role of IA function in the public sector context in Saudi Arabia, stated that management support for IA departments can secure efficient staff and provide them with training and development to

meet the required competency needed by the organization. Management style and organizational structure determine the IA which provides the assurance services and consultations to the organization for effective and efficient utilization of organizational resources (Baharud-din et al, (2014).

## **2.9 Summary and Research Gap**

This chapter has provided a review of both theoretical and empirical literature on the internal audit quality. In its theoretical part the definition, development and role of internal audit quality reviewed in addition to these theories of internal audit and factors for effective internal auditing in public sector are assessed. In the empirical review part the definition and empirical relationship between internal audit quality and organizational performance is discussed.

After theoretical and empirical review of internal audit quality the gaps are: Limited researches were found to have been conducted in the specific area of internal audit quality. The discussion in this chapter shows that there are no specific standards or recognized variables to measure internal audit quality, even if past researches study the determinant, practice of internal audit quality ( Shewamen. H. 2014 Alemzewud A. 2019, Negash B. 2019. Samuel G. 2017, Solomon D.2019.). And factors on internal audit effectiveness (Wndosen S. 2019) in Ethiopia. There is very limited research which studies the effect of internal audit quality on organizational performance in public sectors where its performance not only measures on its financial performance, they also did not follow value added approach which focuses more on assurance and consulting.

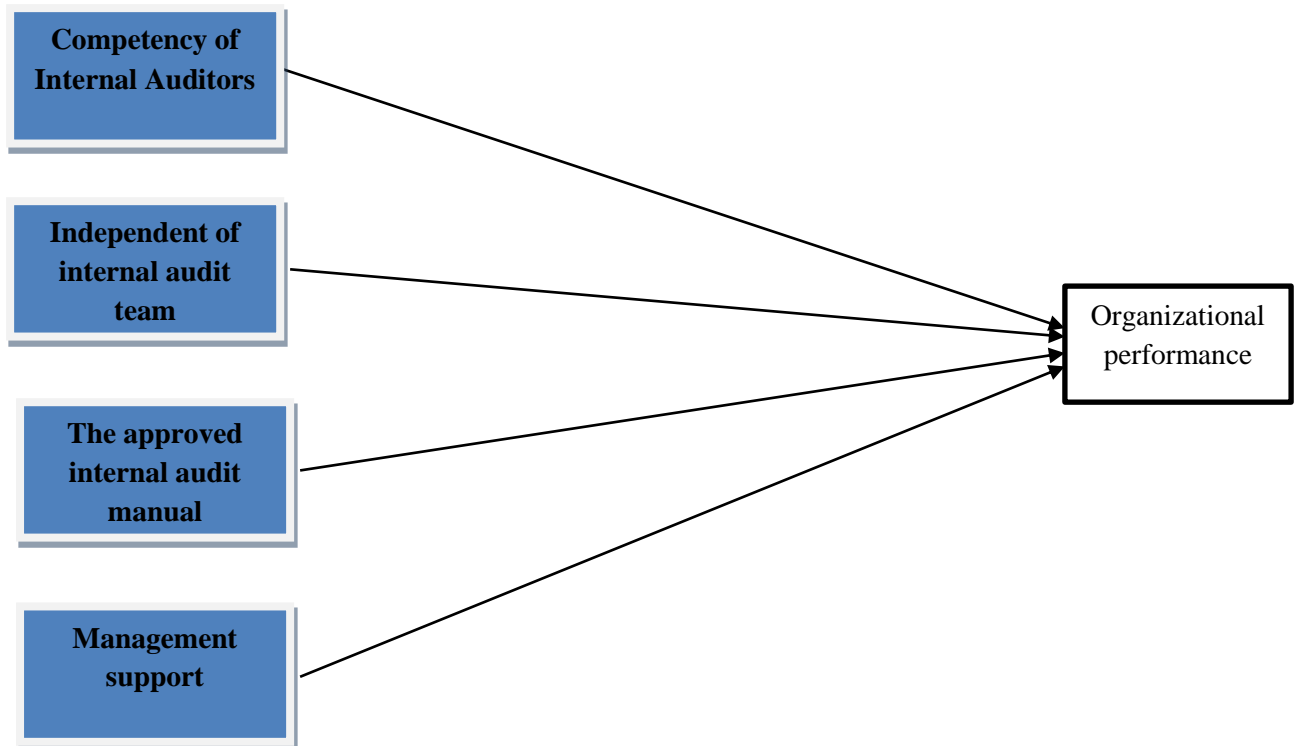
As Arena (2009) suggested that in order to improve the internal audit value added service the internal audit functions could increase their involvement in activities which support risk management and provide recommendation to vital systems, procedures and processes. Past researches also did not consider how conditions like our upcoming election where politician's personal interests and changes in political leadership and in the related administration and bureaucracy may affect internal auditors to do their jobs in public sector. Lastly previous researches did not study the effect of internal audit quality on organizational performance in



road sectors where physical audit also very important as financial audits by targeting those employees who conduct this physical audit.

## 2.10 Conceptual Framework of the Study

Figure 2.1: conceptual framework of the study



Source: To achieve the research objective and to test the research questions, this study used the conceptual framework developed by the researcher after extensive literature review of Shiferaw Y, 2017, Alemzewed A 2019; Cohen & Sayag, 2010; Arena & Azzone, 2009).

## **CHAPTER THREE: RESEARCH METHODOLOGIES**

In this chapter the methods that employed to achieve the current study's objectives is introduced. This chapter also provides a detailed discussion of the adopted research design and the data analysis methods that employed to see the relationship between internal audit quality and organizational performance.

### **3.1 Research Approach**

The study adapted quantitative approach strategy. Creswell, (1994) defines a quantitative approach as an analysis into a social or human problem which fundamentally deals with examining a theory, gathered by diverse measures with numbers and analyze with statistical procedures, so as to find out if the predictive generalizations of the theory are factual. Creswell (2003) points out that a quantitative approach is functional when trying to test a theory or describe or discover factors that influence results. So the researcher tests the effect of internal audit quality on organizational performance via statistical, mathematical and computational techniques.

Similarly, Bryman (2004) explains this as an approach that places on measurement, collection and analysis of data. Here, all the data processed using quantitative analytical techniques these also help the researcher to be more objective. This study follows Pragmatism research philosophy because it accepts concepts to be relevant only if they support action. Pragmatics recognize that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities. So this philosophy will give the researcher flexibility to use whatever combination of methods necessary to find answers to research questions.

### **3.2 Research Design**

The researcher uses cross-sectional survey design to measure independent and dependent variables at the same point in time using close- ended and structured questionnaires. Even though it suffers respondent bias, the survey method has an advantage for their external validity (generalization) since data will be collected in the organizational setting. It has also

have advantage to capture and control for a large number of variables and their ability to study a problem from multiple perspectives or using multiple theories.

This study also follow deductive researches approach the goal of the researcher is to test concepts and patterns known from theory using new empirical data. So in this research variables which are constructed after conducting different theoretical and empirical literature review to measure internal audit quality used to test its effect on organizational performance.

### **3.3 Data Collection Instrument**

As indicated in different literature reviews, there are various methods of collecting data that are employed by social scientists. Among these the researcher of this study uses survey method from primary sources. The primary data collected from research participants through. The questionnaire was developed by the researcher based on the past literature and already used before. It is addressed and collected from the respondent by printed hard copy with instructions regarding how they fill the questionnaires they can be able to answer the questions on their own.

The primary instrument used to collect data in this research was structured questionnaire that have three parts. Part one includes different personal and demographic variables. The main parts of the questionnaire (part 2 and 3) internal audit quality and organizational performance. Internal audit quality questionnaires are adapted with slight modification from the previous researches and literature review (Shiferaw Y, 2017 Alemzewed A 2019; Cohen & Sayag, 2010; Arena & Azzone, 2009). It is measured by using questions which are, Competency of internal audit staff: An audit requires a professional staff that collectively has the necessary education, training, experience, and professional qualifications to conduct the full range of audits required by its mandate (Al- Twaijry et al, 2004).

Independence of Internal Audit Team: Internal audit activity should be free from interference in determining the scope of internal auditing, performing work, and communicating the results. Internal audit manual: is defined by IIA as “a formal written document that guides internal auditors” work, defines the activities purpose, authority and responsibility of auditors. It may also define as access to the information (documents, systems, records, and personnel) necessary to perform and reach at conclusions. Management support: is senior

management supports to internal audit personnel to efficiently carry out its duties, to fulfill internal audit needs and implementation of corrective actions recommended by internal auditors.

Finally to measure organizational performance the researcher Pimsinee Chearskul(2010) questioners which are used to for Thesis submitted in requirement for the degree Doctor in Industrial and Systems Engineering the faculty of the Virginia Polytechnic Institute and State University because these questions used a composite measure of financial performance and non-financial performance was used in order to operationalize organizational performance for public sector organizations. So this questioner is the right answer for this research. The researcher uses a 5 - point Liker scale to get to order level of employees answer which ranges from 1-strongly disagree to 5-strongly agree.

### **3.4 Target Population**

According to Cooper and Schndler (1998), a population is the total collection of elements about which one wishes to make inferences. Saunders (2007) defined research population as the full set of cases from which a sample size can be taken. Cohen (2007) also stated that population is a group of people who are subject to a pace of research. Based on this, the population of this research is all the employees which found on the payroll internal audit directorate, quality assurance and management, engineering procurement directorate, good procurement team and financial management directorate of Ethiopian Roads Authority head office.

The reason for selecting this target population is the researcher follows value added approach which focuses more on assurance and consulting. As Arena (2009) suggested that in order to improve the internal audit value added service the internal audit functions could increase their involvement in activities which support risk management and provide recommendation to vital systems, procedures and processes. So this research also covers respondents outside the traditional internal audit team that are very important for the overall physical and financial audit quality and assurance such as quality assurance and performance management team, engineering procurement director, good procurement team and financial directorate. The total number of professional employees in this target population is 248.

Table 3.1 Target population

<b>Department</b>	<b>No of employees</b>
Internal audit directorate	20
Quality assurance and performance management team	30
Engineering procurement directorate	64
Financial management directorate	118
Good procurement team	16
Total Target Population	248

### 3.5 Sampling Techniques and Sample Size

#### 3.5.1 Sample size

The researcher used the following simplified formula provided by Taro Yamane.

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

Where: n=Corrected sample size

N=Population size

e=Margin of error (MoE), e=0.05 based on the research condition which is 95% confidence level (Source theoretical aspects, formula Taro Yamane: books)

$$n = \frac{248}{1 + 248(0.05)^2} = 153$$

#### 3.5.2 Sampling Techniques

This study uses stratified random sampling. From the total number of employees which are found in the payroll of Ethiopian roads authority the researcher will stratified employees in to internal audit directorate employees, quality assurance and management employees, engineering procurement directorate employees, good procurement team and financial management directorate employees. After the sample size is determined to all of the employees in directors and teams except for financial employees the questioners were distributed. But for financial management employees the questioner was distributed randomly to the employees of each in the office.

### 3.6 Data Analysis

The quantitative data is analyzed through successive stages of analysis: preliminary analysis (screening data prior to analysis), descriptive analysis, and multivariate analysis. Preliminary analysis (aims at establishing/testing necessary conditions prior to multivariate analysis) investigated some issues such as addressing missing data, dealing with outliers, test of normality, multicollinearity, linearity, homoscedasticity and normality. The next stage concerned with some descriptive analysis, which included some central tendency measures; variability (dispersion) measures; and some information concerning the distribution of scores. Furthermore, multivariate analysis techniques employed in the current study; SPSS (Statistical Package for the Social Sciences) 23 package used for the statistical analysis and assessment of data gathered within the scope of the survey. The Pearson product-moment correlation, and Linier Regression analysis is conducted in order to determine the relationship between variables and the effect of internal audit quality variables on organizational performance.

The regression analysis model stated below is used to identify the effect of internal audit quality on organizational performance.

$$OP = \beta_0 + \beta_1CIA + \beta_2IIAT + \beta_3AIAM + \beta_5MS + e$$

Where:

OP = Organizational performance

$\beta_0$  = Constant Term

$\beta_1$  to  $\beta_5$  = Coefficients of independent variables and

CIA= Competence internal auditor

IIAT= Independence of internal audit team

AIAM= Approved internal audit manual

MS=Management Support and

e = error term

### 3.7 Validity and Reliability

#### 3.7.1 Validity

AnolBhattacharjee (2012) define “Validity, often called construct validity, refers to the extent to which a measure adequately represents the underlying construct that it is supposed to

measure.” the researcher use standardized questioner and questioners which are used by other researcher on the same research area. The researcher used Shiferaw Y, 2017, Alemzewed A 2019; Cohen & Sayag, 2010; Arena & Azzone, 2009) questioner to measure internal audit quality and PimsineeChearskul(2010) questioners to measure organizational performance.

### 3.7.2 Reliability

Reliability is the degree to which the measure of a construct is consistent or dependable. In other words, if we use this scale to measure the same construct multiple times, do we get pretty much the same result every time, assuming the underlying phenomenon is not changing? (AnolBhattacharjee(2012,p.59). Reliability is a necessary contributor to validity but not a sufficient condition (Nunaly, 1968). So to confirm the reliability of the measurement the researcher conduct pilot test and test the reliability of the measurement tested The reliability scores (Cronbach Alpha or  $\alpha$ ) of each construct conducted. Cronbach’s alpha, which is an internal consistency method, based on the recommendation of Malhotra (2010). Cronbach’s alpha is a technique that calculates the mean reliability coefficient for all possible ways of splitting a set of items into two halves (Malhotra, 2010).Nunnally (1978) state the lower limit for Cronbach’s alpha is 0.70. So this study achieves the minimum requirement for the reliability of measurements (table 3.2).

Variables	Cronbach’s alpha coefficient	Items
Competency of Internal Auditors	0.730	6
Independence of Internal Audit Team	0.780	4
The approved internal audit manual	0.743	4
Management Support	0.723	4
Organizational Performance	0.700	10

Table 3.2 Reliability analysis

### 3.8 Ethical Consideration

Sekaran (2003) recommends about the research ethical obligations which is the information obtained from the respondents is kept strictly confidential, Researcher does not falsify the nature of the study to respondents, and the purposes are clarified clearly, No one is forced to reply to the survey and there is absolutely no misrepresentation in reporting the data collected during the study.

## CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

This chapter sets out the findings by presenting the quantitative analysis of the data obtained from the questionnaire survey in order to test the dimensional structure of internal audit quality and organizational performance. This analysis was carried out to test the effect of internal audit quality on organizational performance. Firstly, preliminary analysis (screening the data prior to analysis) is carried out to some issues such as missing data, outliers, normality, multicollinearity, linearity, and homoscedasticity. The next phase is concerned with some descriptive analysis, which included the respondents' characteristics and some central tendency measures; variability (dispersion) measures; and some information concerning the distribution of scores. Finally, multivariate analysis, such as correlation and regression analysis is employed to test the relationship and effect between internal audit quality and organizational performance.

### 4.1 Missing Data and Outliers.

The researcher collects 147 questionnaires from 153 distributed. To detect missing data and multivariate outlier SPSS 23 was used. The researcher identifies the Mahalanobis distance of each participant sample data and use formula  $(1 - \text{Cdf. chisq}(\text{Mahalanobis distance}, \text{observed variable number}))$  to determine the significance level of the Mahalanobis distance and delete all the data which is below 0.01 significant values. Through this method the researcher can be able to detect both missing data and multivariate outliers which is one of participant sample data in this case. So the researcher uses 145 sample sizes to conduct the descriptive multivariate analysis.

*Table 4.1: Mahal. Distance*

	Minimum	Maximum	Mean	Sta. deviation	N
Mahal. Distance	0.212	10.460	3.972	2.539	145

Source; Survey data (2021)

As table 4.1 shows the Mahal. Distance of 145 samples has the mean value of 3.972 so this shows the data is normally distributed and did not have outliers that are far from its mean value.



## 4.2 Descriptive Statics

### 4.2.1. Demographic Statistics of Respondents

Table 4.2 Demographic Statistics of Respondents

Descriptive statics Frequency		Frequency	Percent	Cumulative Percent
Sex of respondents	Male	91	62.8%	62.8%
	Female	54	37.2%	100%
Age of respondents	20-29 years	17	11.7%	11.7%
	20-39 years	60	41.4%	53.1%
	40-49 years	45	31.0%	84.1%
	>50 years	23	15.9%	100%
Respondents field of study	Accounting	36	24.8%	24.8%
	Management	15	10.3%	35.2%
	Economics	12	8.3%	43.4%
	Engineering	82	56.6%	100%
Educational level of respondents	Diploma	10	6.9%	6.9%
	First degree	110	75.9%	82.8%
	Master's degree and above	25	17.2%	100%
Professional certificate of respondents	CIA	3	2.1%	2.1%
	CGAP	5	3.4%	5.5%
	OTHERS	137	94.5%	100%
Work experience in organizational audit position	Below 5 years	2	1.4%	1.4
	5-7 years	4	2.8%	4.1%
	8-10 years	5	3.4%	7.6%
	Above 10 years	2	1.4%	9.0%
	None	132	91%	100%
Work experience other than auditor	Below 5 years	24	16.6%	16.6%
	5-7 years	73	50.3%	66.6%
	8-10 years	21	14.5%	81.4%
	Above 10 years	14	9.1%	91.0%
	None	13	9%	100%

Source; Survey data (2021)

As shown in table 4.2 above of the total 145 respondents, 62.8 %, which 91 of the respondents are male and 37.2% which is 54 of the respondents are female. The table shows that 17 (11.7%) of the respondents are found between the age of 20- 29, 60 (41.4%) of the respondent found between the age of 30-39, 45 (31.0%) of the respondents found between the age of 40-49 and the rest 23 (15.9%) of the respondents found above the age of 49. So the research can conclude that most of the respondents young. As shown in the table above 36 (24.8%) of the respondents study accounting, 15 (10.3%) of the respondents study management, 12 (8.3%) of the respondents study economics and the rest of the respondents which are 82 (56.6%) of the respondents have study engineering.

Table 4.2 also states 10 (6.9%) of the respondents have diploma, 110 (75.9%) of the respondents have a first degree and the rest of the respondents which are 25 (17.2%) of the respondents have Master's degree and above. So most of the respondents 135 (93.1%) of the respondents have a first degree and above. As states above 3 (2.1 %) of the respondents have certificate in internal audit (CIA), 5 (3.4%) of the respondents are have certificate of government audit profession (CGAP), and the reset 137(94.5%) of the respondents have not any professional certificate which is specifically related with financial audit.

The descriptive statistics table also shows that 2 (1.4%) of the respondents have work experience between 0-5 years, 4 (2.8%) of the respondents have between 5-7 years work experience, 5 (3,4%) of the respondents have work experience between 8-10 years , 2 (1.4%) of the respondents have work experience above 10 years and 132 (91%) of the respondent did not have any financial auditing experience. Finally the table above shows that 24 (16%) of the respondents have work experience between 0-5 years, 73 (50.3%) of the respondents have between 5-7 years' work experience, 21 (14.5%) of the respondents have work experience between 8-10 years, 14 (9.7%) of the respondents have work experience above 10 years and lastly 13 (9%) of the respondents have only internal auditing work experience.

So this demographic data shows even if most of the respondents are engineers whose focuses is on physical audit there is still limitation of certified and experienced auditors in the organization since the organization administer the largest portion of the government budget.

#### *4.2.2 Descriptive Statistics of the Variables*

Table 4.3 shows internal audit variables which is CIA, IIAT, AIAM and MS means are 3.2195, 3.6379, 3.1310 and 3.1190, and OP variable mean is 3.4517. So the mean value shows that most of the variables have the mean value between 2.11 and 3.63, which indicates that there is no high effect of extreme screens on the mean and that there is no problem with outliers.

Descriptive statistics also provide some information concerning the distribution of scores (skewness and kurtosis). Skewness gives an indication of the symmetry of the distribution. A skewed variable is a variable whose mean is not in the middle of the distribution, while Kurtosis, on the other hand, provides information about the peakedness of a distribution; a distribution can be too peaked (will show short, thick tails) or too flat (will show long, thin tails) (Tabachnick and Fidell, 2007). The values of skewness and kurtosis should be 0 in a normal distribution of data, where the further the value of the variable is from 0, the more likely the data are not normally distributed, additionally its value has its related standard error (Tabachnick and Fidell, 2007).

However, the values of the skewness and kurtosis are not in themselves formative but have to be converted to z score values to standardize them so any scores that were originally measured in different units can be compared (Tabachnick and Fidell, 2007). However, these tests are very sensitive to large sample size (N more than 200) and it is recommended to inspect the shape of the distribution (e.g. using a histogram, and Normal Q-Q Plot,) and visually look at the values of skewness and kurtosis statistics rather than calculate their significant (Tabachnick and Fidell, 2007) which is not the case in this research. So the above table shows most of the variables skewness and kurtosis statistics is not far from which led the researcher to conclude that the data are normally distributed.

Table 4. 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CIA	145	1.00	5.00	3.2195	.76922	-.036	.201	.089	.400
IIAT	145	1.00	5.00	3.6379	1.10079	-.601	.201	-.553	.400
AIAM	145	1.00	4.75	3.1310	.94193	-.715	.201	.035	.400
MS	145	1.00	4.50	3.1190	.92566	-.678	.201	-.036	.400
OP	145	1.30	4.80	3.4517	.67516	-.500	.201	.212	.400
Valid N (listwise)	145								

Source; Survey data (2021)

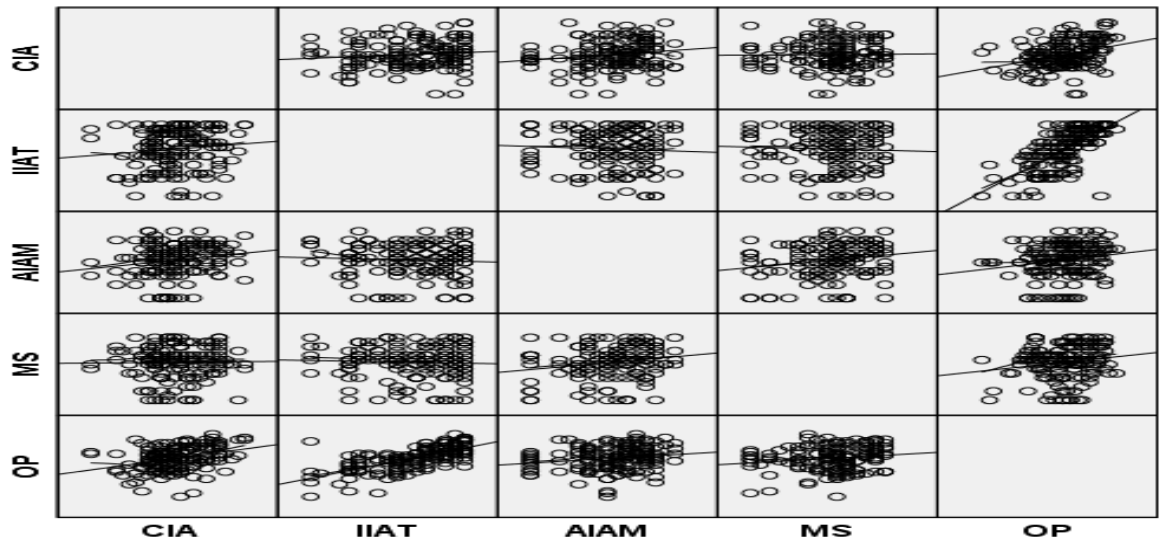
### 4.3. Test for Ordinary Least Square Assumptions

In this section some issues that affect the quality of multivariate tests and assumptions of the Structural equation model, such as linearity, multicollinearity, homoscedasticity and normality of the data is tested.

#### 4.3.1. Linearity

The linearity of the relationship between dependent and independent variables, which represents the degree to which change in the dependent variable is associated with the independent variable (Hair et al., 2006). In other words, the relationship between the two variables should be linear. This means that when one looks at a scatter plot of scores a straight line (roughly) should be seen, not a curve (Pallant, 2007). Linearity is checked using scatter plots and results are satisfactory and the all variables relationships are positive it shown in figure 4.1.

Figure 4. 1: linearity test



Source; Survey data (2021)

#### 4.3.2 Multicollinearity

Andy (2006) suggested that a tolerance value less than 0.1 almost certainly indicates a serious co-linearity problem. Liu (2010) also suggested that a VIF value greater than 10 there is also serious co-linearity problem. As shown (figure 4.2) the variable there is no multicollinearity problem.

Figure 4. 2: multicollinearity

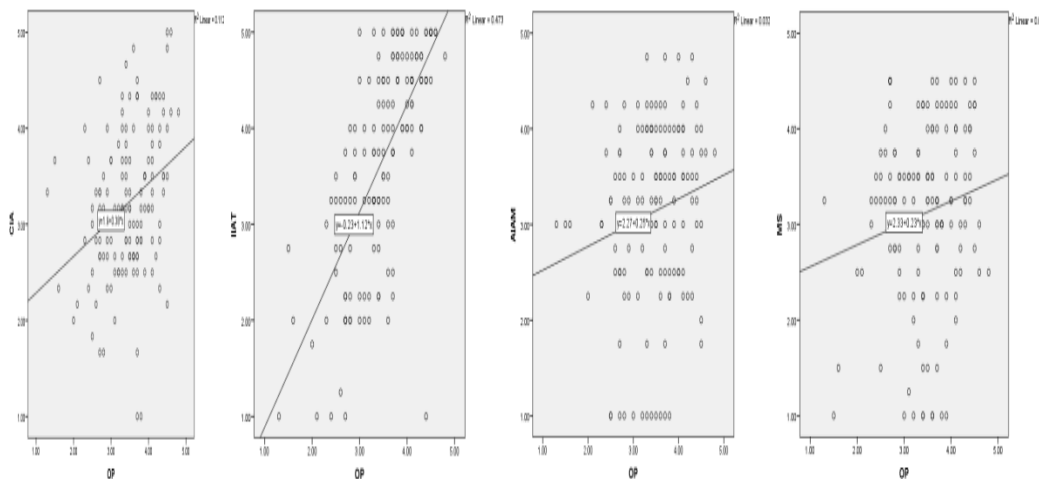
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	CIA	.952	1.050
	IIAT	.979	1.021
	AIAM	.927	1.079
	MS	.961	1.041

Source; Survey data (2021)

### 4.3.3 Homoscedasticity

Additionally, homoscedasticity reflects the presence of equal variances, where, the variability in scores for variable X should be similar at all values of variable Y. This can be ascertained through checking the scatter plot where a fairly even cigar shapes should be shown (Pallant, 2007). It is important because the variance of the dependent variables should be equally dispersed across the range of the independent values to allow a fair analysis of the relationship across all values (Hair, Black, Babin, Ralph & Ronald 2006). None of the individual relationships between the independent/dependent variable indicate a violation of homoscedasticity (cone or diamond shapes) and all relationships showed a roughly cigar shape (figure 4. 3)

Figure 4.3 Homoscedasticity



Source; Survey data (2021)

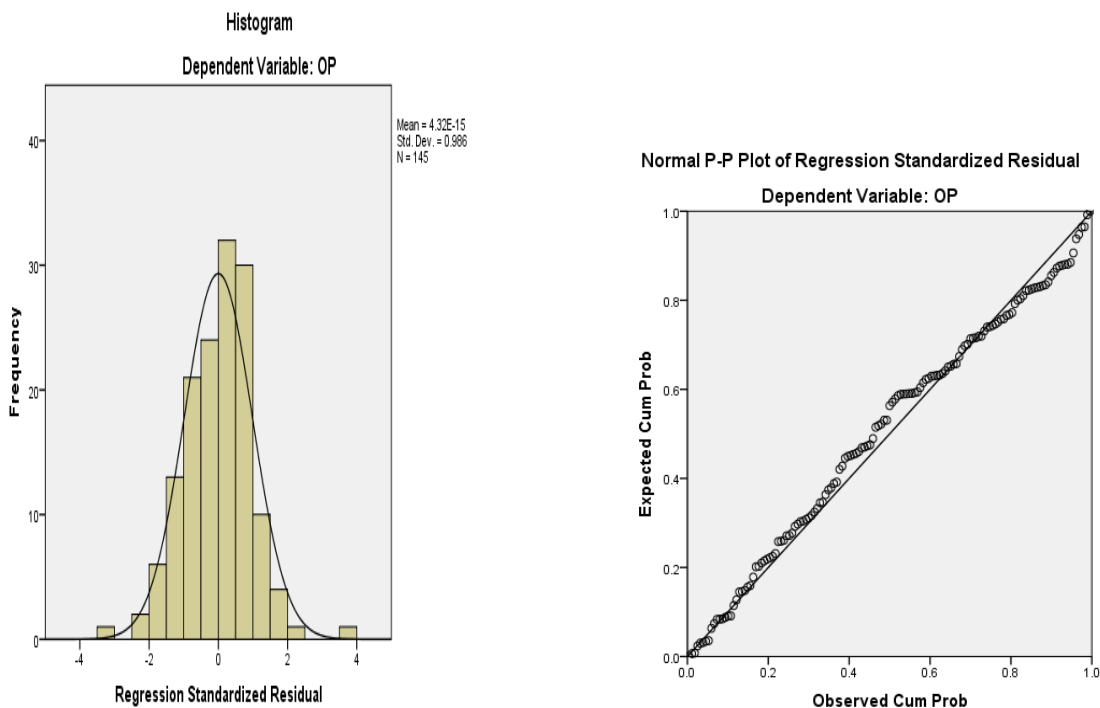
### 4.3.4 Normality

The normality issue, normality is used to "describe a symmetrical, bell-shaped curve, which has the greatest frequency of scores in the middle, with smaller frequencies towards the extremes (Pallant, 200). Univariate normality for the individual variables can be tested by reviewing the graphs such as histogram, and normal probability plots (Hair et al., 2006; Tabachnick and Fidell, 2007; Pallant, 2007). Frequency histograms can also be used for assessing normality, particularly with the normal distribution as an overlay (Griffith, 2010). It

is regularly a pileup of values near the mean with values trailing away in either direction, the univariate normality of the variable would be met (Tabachnick and Fidell, 2007). Normal probability plots (Normal Q-Q plots) can also be used (Tabachnick and Fidell, 2007).

In Normal Q-Q plots, the scores are sorted and ranked and then an expected normal value is calculated and compared for each case with the actual normal value. In a Normal Q-Q Plot, the observed value for each single score is plotted against the expected value of the normal distribution; a reasonably straight line implies a normal distribution (Pallant, 2007). It is claimed that the negative effect of non-normality can be serious in small sample size (less than 50 cases), while with a larger sample size (the current study sample size is 145) the negative effect of non-normality may be negligible (Tabachnick and Fidell, 2007). As shown in figure 4.4 the bell-shaped curve and the variables nearness to the liner curve conform all of the normality criteria is fulfilled.

Figure 4. 4: normality test



Source; Survey data (2021)

#### 4.4 Correlation Analysis

Table 4. 4: Correlation Analysis

		CIA	IIAT	AIAM	MS	OP
CIA	Pearson					
	Correlation	1	.116	.177*	.016	.334**
	Sig. (2-tailed)		.166	.033	.850	.000
	N	145	145	145	145	145
IIAT	Pearson					
	Correlation	.116	1	-.059	-.044	.688**
	Sig. (2-tailed)	.166		.484	.597	.000
	N	145	145	145	145	145
AIA M	Pearson					
	Correlation	.177*	-.059	1	.195*	.178*
	Sig. (2-tailed)	.033	.484		.019	.032
	N	145	145	145	145	145
MS	Pearson					
	Correlation	.016	-.044	.195*	1	.167*
	Sig. (2-tailed)	.850	.597	.019		.045
	N	145	145	145	145	145
OP	Pearson					
	Correlation	.334**	.688**	.178*	.167*	1
	Sig. (2-tailed)	.000	.000	.032	.045	
	N	145	145	145	145	145

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

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

Source; Survey data (2021)

The results from the above table shows, the Pearson Correlation coefficient between CIA and OP was 0.334. This indicates a strong and Positive linear association between the predictor



and the explanatory variable. IIAT had a correlation value of 0.688 with OP which is also positive and significant. The study also noted that AIAM had significant positive correlation by value of 0.178 with OP. Finally the table shows that MS has a significant positive relationship with OP by coefficient value of 0.167.

#### 4.5 The Effect of Internal Audit Quality on Organizational Performance

As it states in chapter three, the regression model was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Whereby Y represents organizational performance, X1 is Competency of Internal Auditors, X2 is Independence of Internal Audit Team, X3 is the approved internal audit manual and X4 is Management Support. B0 is the model's constant, and  $\beta_1 - \beta_4$  are the regression coefficients while  $\epsilon$  is the model's significance from f-significance results obtained from analysis of variance (ANOVA).

##### 4.5.1 Model Summary

Table 4. 5: model summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.772 <sup>a</sup>	.595	.584	.43551

a. Predictors: (Constant), MS, CIA, IIAT, AIAM

b. Dependent Variable: OP

Source; Survey data (2021)

Table 4.5 shows that there is a good linear association between the dependent and independent variables used in the study. This is shown by a correlation (R) coefficient of 0.595. The determination coefficient as measured by the adjusted R-square presents a moderately strong relationship linking dependent and independent variables with a value of 0.584. This depicts that the model accounts for 58.4% of the total observations while 41.6% remain unexplained by the regression model.

#### 4.5.2 ANOVA Test

Table 4. 6: ANOVA Test

ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	39.089	4	9.772	51.523	.000 <sup>b</sup>
	Residual	26.553	140	.190		
	Total	65.642	144			

a. Dependent Variable: OP

b. Predictors: (Constant), MS, CIA, IIAT, AIAM

Source; Survey data (2021)

The ANOVA statistics presented in Table 4.6 was used to present the regression model significance. An F-significance value of  $p = 0.000$  was established showing that there is a probability of less than 0.1% of the regression model presenting false information.

#### 4.5.3 Regression Coefficients

Table 4. 7: Regression Analysis

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.595	.239		2.489	.014
	CIA	.200	.048	.228	4.131	.000
	IIAT	.415	.033	.677	12.469	.000
	AIAM	.104	.040	.145	2.604	.010
	MS	.120	.040	.165	3.012	.003

a. Dependent Variable: OP

Source; Survey data (2021)

The following regression result was obtained:

$$= 0.595 + (0.200) \text{ CIA} + (0.451) \text{ IIAT} + (0.104) \text{ AIAM} + (0.120) \text{ MS}$$

From the regression coefficients, when independence of internal audit team, availability of internal audit manual and management support are held constant, a unit increase in competency of internal auditors will lead to 0.200 increases in organizational performance in Ethiopian Roads Authority. When competency of internal auditors, availability of internal audit manual and management support are held constant, a unit increase in independence of internal audit team will lead to 0.451 increases in organizational performance in Ethiopian Roads Authority.

When competency of internal auditors, independence of internal audit team and management support are held constant, a unit increase in availability of internal audit manual will lead to 0.104 increases in organizational performance in Ethiopian Roads Authority. When competency of internal auditors, independence of internal audit team and availability of internal audit manual are held constant, a unit increase in management support will lead to 0.120 increases in organizational performance in Ethiopian Roads Authority.

#### 4.6 Hypothesis Testing

*Table 4.8: Causal relationships regression result*

IV		DV	Estimate	S.E.	P
CIA	-->	OP	0.200	0.049	0.000
IIAT	-->	OP	0.415	0.033	0.000
AIAM	-->	OP	0.104	0.040	0.010
MS	-->	OP	0.120	0.040	0.003

Source; Survey data (2021)

Based on the above results the proposed hypothesis is conformed as follows:

H1 Competency of internal auditors has positive effect on organizational performance in Ethiopian Roads Authority.

Usually the p value and unstandardized regression estimate is the statistical tool which is used to test significance level and the amount of effect independent variable has on the dependent variable relationship. The regression result which is stated above shows that Competency of internal auditors effect on organizational performance is significant with p-value 0.000 ( $p > 0.05$  accepted). The unstandardized regression estimate (0.200) also shows competency of internal auditors have positive significant effect on organizational performance in Ethiopian Roads Authority.

H1 accepted

H2 Independence of internal audit team has positive effect on organizational performance in Ethiopian Roads Authority.

The regression result in the table shows that independence of internal audit team has positive effect on organizational with the p-value of 0.000. The unstandardized regression estimate also shows this effect is positive with a coefficient of 0.415 in Ethiopian Roads Authority.

H2 accepted

H3 the approved internal audit manual have positive effect on organizational performance in Ethiopian Roads Authority.

The result shows the approved internal audit manual effect on organizational performance in this study is significant with p- value of 0.010. The unstandardized regression estimate result also shows that they have a positive relationship with regression coefficient of 0.104 in Ethiopian Roads Authority.

H3 is accepted

H4 management support has positive effect on organizational performance in Ethiopian Roads Authority.

The result shows the management support effect on organizational performance in this study is significant with p-value of 0.003. The unstandardized regression estimate result also shows that they have a positive relationship with regression coefficient of 0.120 in Ethiopian Roads Authority.

H4 is accepted

#### 4.7. Discussion of Major Findings

The major findings which were obtained from data analysis of the survey questionnaire shows, the researcher conducted missing data and outlier test by using mahalanobes test and find 2 errors and outlier data from the 147 and so the researcher use 145 samples to the analysis of the study. The descriptive statistics show that 62.8% of the respondents are male, which is higher than female respondents (37.2%). The descriptive statistics also show that 84.1% of the respondents are under 49 years of age and 93.1% of the respondents have a first degree and above educational background. This statics show 24.8% of the respondents study accounting, 10.8% study management, 8.3% economics and 56.6% of the respondents are engineering graduates.

The statistics also shows only 8 and 13 persons have approved financial audit certificate and internal auditor work experience respectively. The descriptive statistics of the variables show that the mean value of the response of respondents for CIA is 2.2195, for IIAT 3.6379, for AIAM 3.1310, for MS 3.1190 OP 3.4517. Since most of the mean values are above 2.5 the data not have outlier problems. This outlier problem can also test by skewness and kurtosis test which confirms the data is normally distributed because most of their statistical value of skewness and kurtosis is very near to 0.

In addition to this the researcher also conducted linearity, mulicolliearity, homoscedasticity and normality test which all are the basic preconditions of correlation and regression analysis. The test confirms that all of the above assumptions are satisfied with this study. The researcher also conducts correlation analysis to see the relationship between the variables. The result shows that there is significant and positive relationship between CIA, and OP and IIAT and OP with p-value of and coefficient of 0.000, 0.0334 and 0.000, 0.688 respectively. The study also shows the relationship between AIAM and MS variables of internal audit quality and OP is positive and significant with the coefficient and P-value 0.178, 0.032 and 0.167 and 0.045 respectively.

Lastly by using unstandardized regression estimate value and p-value the hypothesis are tested. The hypothesis test shows CIA and IIAT have both significant and positive effect on OP with p-value and unstandardized regression estimate coefficient of 0.000 & 0.200 and 0.000 & 0.451 respectively. The effect of AIAM and MS on OP is positive and significant with p-value of 0.010 & 0.003 and coefficient of 0.178 & 0.167 respectively.

The finding of this study align with Kanbiro O, (2019) finding which states the internal auditors technical competence has impacts on the performance of the organization and the audit staff needs to have competence in risk profiling in order to effectively run their activity by applying professional expertise that they have equipped. Wubishet & Dereje (2018) and Kirima, (2016) and Tesema (2018) also states competency of internal audit staff has positive and significant relationship with performance.

Suleiman B, Ayoib A and Nor Y, (2018) established that independence of IA department affects the performance of Nigerian universities to a certain extent. The finding indicates that an internal audit department must be independent in terms of personnel and operational activities of an organization of internal allows the audit activity to conduct work and be perceived to conduct work without interference by the entity under audit and independence is a key factor for the internal audit activity to add value.

According to research done by Kirima N. (2016), there is positive and significant relationship between internal audit independence and performance. The other research also evidenced that there is positive relationship between independency of internal audit and good governance in public sector (Shewamene Hailemariam, 2014). Independence of internal audit was also clearly evidenced that there is statistically significant and positive relationship between independency of internal audit and organizational performance in public sector (Kanbiro O, 2019).

As O'Regan D (2002) concluded, a well-drafted charter is an important ingredient of effective internal audit function. It helps to direct the efforts Van Peurse, (2005) added that the presence of a strong manual 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 independence status of an IA.

On the study conducted by Alzeban and Sawan, (2013) on the role of IA function in the public sector context in Saudi Arabia, stated that management support for IA departments can secure efficient staff and provide them with training and development to meet the required competency needed by the organization. Management style and organizational structure determine the IA which provides the assurance services and consultations to the organization for effective and efficient utilization of organizational resources (Baharud-din et al, (2014).

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION**

This chapter discusses in the first section summary of the main findings, followed by a conclusion. Then, Section 5.2 conclusion of the research, section 5.3 recommendations and finally section 5.4 states the limitations of the study.

### **5.1 Summary of Main Findings**

The main objective of this study is to examine the effect of internal audit quality on organizational performance. The result of this analysis specially the final regression analysis shows the following findings: Among the dimension of internal audit quality after extensive correlation and regression analysis and the most important variable to measure internal audit quality are all related to independency of internal audit team in the organization. The role of IA is gradually being transformed from primarily being concerned with checking the propriety of transactions and records and a systems evaluation approach, to becoming a value-adding service with a broader scope of activities, including assisting organizations in the management of risk.

Subsequently, the role of IA has developed to a pre-eminent position of advising the board of directors, although tensions remain between this consulting role and the need for independence (Mihret, James & Mula 2010). Clark, Gibbs and Schroeder (1981) find that the independence of the internal audit department is the most important criteria influencing IA services. Bou-Raad (2000) believes that the strength of an internal audit department is assessed according to the level of IA independence from management and from other operating responsibilities. Independence of internal auditors increases the internal auditor's effectiveness because this independence may reduce the level of conflict between loyalty to the employer and loyalty to specific managers, and gives auditors an encouraging work environment in which they can perform their task without pressure.

The finding shows CIA have a positive effect on organizational performance with an unstandardized regression coefficient of 0.200 and this effect is significant with p-value of 0.000. IIAT has also positive effect on organizational performance with unstandardized regression coefficient 0.415 and this effect is also significant with the p-value of 0.000.

AIAM and MS also have positive significant effect on organizational performance with unstandardized coefficient and p-value of 0.104, 0.010 and 0.120, 0.003 respectively.

The finding also shows only 8 out of 13 internal auditors have professional certificate. This need to improve, because as Gramling and Myers (1997), find that certification of internal auditors is perceived as an indicator of competence. On the other hand the physical audit which is conducted by engineers is given based on professional knowledge as the statics shows 100% of the engineers have BA degree and above and this will be supported by 6 month practical training on the Ethiopian road authority engineering and management training center before they start to do their jobs.

## **5.2 Conclusion**

Nowadays businesses operate in the fast, competitive and ever changing environment. Their success is based on the ability to adapt to the environmental changes, to fulfill organizational objectives and to manage risks as the business landscape evolves every day. Dittenhofer (2001) prescribed that an internal audit is to assist firms in achieving objectives. Properly developed internal audit can positively influence business operations, risk management, and decision making on all levels of the organization. Olga Bubilek (2017), states operations of internal audit provide value to the company by its level of autonomy and the possibility to independently assess business operations.

The senior management should ensure the internal audit directorate is independent of the company's operations so that they are able to express an independent opinion of the company. Internal audit influences an organization positively by service assurance and supervision of internal control processes.

This research also found out internal auditor competency is the second most important internal audit factor to affect organizational performance. Continuous training of internal auditors is necessary to enhance their skills in risk assessment and fraud detection that happening in the sector which contributed to the performance of the organization. Early detection and reporting of frauds in the organization help prevent losses, which improves profitability.

Internal audit function is actively involved in the risk assessment and management and their professional and technical skills are very relevant. The number of audit staff can affect the



results of audit, assigning different responsibilities to one person causes inefficiency in operations. Top management support not only improves auditor efficiency but also encourages their involvement in risk prevention and help to use internal audit as a base to contribute and assure company goals.

### **5.3 Recommendation**

Based on the researcher finding the following recommendations are given

- ❖ Internal audit departments should expand their range of work to cover all types of operations (financial and non-financial). In this regard, IA work should encompass checking efficiency of operating results; checking compliance with contracts when applicable; auditing of agreements and contract terms before being signed; and assisting management by identifying risk exposures of the organization. Internal audit also needs to carry out appraisal of existing systems and be involved in the revision or development of new systems before implementation. Thus, the IA function should expand its scope in ways that allow it to make greater contributions to the organization it serves.
- ❖ As the finding shows independent of internal audit team is the main dimension which creates internal audit quality in Ethiopian Roads Authority. So this organization is recommended to the implement organizational structure which that helps to make the internal audit directorate to feel free from the pressures of any higher official in the origination or politician since as researches indicates that politicians and public officials can use large capital projects to obtain personal gain or win votes, instead of selecting projects on the basis of compliance with national and sector-level strategic plans. (Jill Wells, 2015).
- ❖ The organization also needs to pay attention to other professionalism, who are not engineers like auditors, accountant, procurement and supply officers, property management officers because to be effective and efficient every employees should have to know what they are doing. They must get training and development opportunities like which is offered to engineers. This also helps to motivate the employees to be onboard with the management to achieve organizational vision and missions.

#### **5.4 Limitation of the Study**

This study has the following limitations

- ❖ This study is restricted in scope, due to the fact that it is only done on Ethiopian road authority. It may be helpful to determine if the attitudes and beliefs of the responders to this study are similar to those responding to the same issues in similar government and private sector bureaus and environments.
- ❖ The study was based only on quantitative data on questionnaires as the main tool for data collection, and then this question was analyzed statistically; thus, the disadvantages of using this method of data collection, added to the limitations of this research. Because of the sensitivity of the issues involved, if an open ended question is added to the questions, they might give more insight and help to support the quantitative research data results.

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## Appendix A: Questioners

**Saint Mary's University**

**School of Graduate Studies**

**Department of Accounting and Finance (MBA)**

The objective of this questionnaire is to collect information that will help to assess the effect of internal audit quality on organizational performance in the Case of Ethiopian Roads Authority. This study is to conduct for the partial fulfillment of Master's Degree in accounting and finance. 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.

### **Part I: General Information**

1. Sex/Gender/: Male ( \_\_\_\_\_),Female ( \_\_\_\_\_ )
2. Age in years: 20 to 29 ( \_\_\_\_\_), 30 to 39 ( \_\_\_\_\_), 40 to 49 ( \_\_\_\_\_), 50 to 59 ( \_\_\_\_\_), above 60 ( \_\_\_\_\_).
3. Your field of study: Accounting ( \_\_\_\_\_), Management ( \_\_\_\_\_), Economics ( \_\_\_\_\_), Other specify \_\_\_\_\_
4. Your level of professional qualification: TVET Certificate, ( \_\_\_\_\_), Diploma ( \_\_\_\_\_), Bachelor degree ( \_\_\_\_\_), Master's degree ( \_\_\_\_\_), others specify ( \_\_\_\_\_).
5. Professional certification: Certified in Internal Auditor (CIA),( \_\_\_\_\_), Certified in Government Auditing Profession (CGAP), ( \_\_\_\_\_),others specify ( \_\_\_\_\_).
6. Work experience in the organization in any position ( \_\_\_\_\_),5-7 years ( \_\_\_\_\_),8-10years ( \_\_\_\_\_), 10 years and above ( \_\_\_\_\_),
7. Work experience other than internal auditor 0-5 years ( \_\_\_\_\_),5-7 years ( \_\_\_\_\_),8-10years ( \_\_\_\_\_), 10 years and above ( \_\_\_\_\_),

## Part II: Internal Audit Quality Questions

**SD**= Strongly Disagree

**A**= Agree

**D**= Disagree

**SA**=Strongly Agree

**N**= Neutral

		<b>SD</b> <b>1</b>	<b>D</b> <b>2</b>	<b>N</b> <b>3</b>	<b>A</b> <b>4</b>	<b>SA</b> <b>5</b>
<b>A. Competency of Internal Auditors</b>						
1	Internal auditors have a deep professional knowledge on the overall activities of the department.					
2	Do you think that the sectors audit department or division has improved in terms of appropriately qualified or professional staff?					
3	Internal auditors are proactive (creating or controlling a situation rather than just responding).					
4	Internal audit had been developed a good cooperation between auditors and audittees.					
5	Internal auditors undertake continuous professional development trainings or attend educational seminars					
6	Internal auditors have adequate educational background.					
<b>B. Independence of Internal Audit Team</b>						
7	Internal audit provides reports to the board of directors (or audit committee).					
8	Internal auditors include in their reports any fault, fraud, wrongdoing, and mistake without influence from any one					
9	Internal auditors have unrestricted access to all departments and employees in the sector					
10	Internal audit participate in the development of the sector processes.					
<b>C. The approved internal audit manual</b>						
11	Internal audit charter is maintained (available) in my office /sector					
12	Internal audit manual specifies the purpose, authority and responsibility of internal auditors clearly.					

14	The purpose and authority in the internal audit manual is matching with “Standards for the Professional Practice” formulated by the Institute of Internal Auditors					
<b>D. Management Support</b>						
15	Senior management supports internal audit personnel.					
16	Internal audit department is large enough to efficiently carry out its duties.					
17	Senior management is aware of internal audit needs.					
18	Top management of the organization demands implementation of corrective actions recommended by external auditors					

### Part III: Organizational Performance Questions

MW= much worse;

SB=slightly better

W= worse

B=better

SW= slightly worse

MB=much better

		MW	W	SW	SB	B	MB
<b>E. Organizational Performance</b>							
19	Reputation in its sector						
20	Quality of products services or programs						
21	Level of innovation						
22	Customer satisfaction						
23	Success rate in launching new products services or programs						
24	Employee satisfaction						
25	Overall financial performance						
26	Adaptation to the changing conditions of the environment						
27	Business growth						
28	Cost Performance						

