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**The Impact of Information Technology in Financial statement Audit
Quality: In the case of grade “A “External Audit Firms in Ethiopia**

**A Project Paper Submitted to the Department of Accounting and Finance
in Partial Fulfilment of the Requirements for the Degree of Master
Science in Accounting and Auditing**

By

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Declaration

I hereby declare that the following title “**The Impact of Information Technology in Financial statement Audit Quality: In the case of grade “A” External Audit Firms in Ethiopia**” is my own work, and it contains no material previously published or written by another author, nor material that has been approved for the award of any other degree or diploma by the university or other institute of higher learning, except where due acknowledgment has been made in the document, to the best of my knowledge and belief.

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Acronyms and Abbreviations

AAU - Addis Ababa University

IT- Information technology

IAASB – International Auditing and Assurance Standards Board

IFAC – International Federation of Accountants

ISA-International Standards on Auditing

CPA-Certified public accountant

ACCA-Associations of Chartered Certified Accountants

NAS-Non-Audit Services

AABE- Accounting and Auditing Board of Ethiopia

EPAAA-Ethiopian Professional Association of Accountants and Auditors

OFAG-Office of the Federal Auditor General

UNDP -United nation developing program

IFTS-Integrated testing facility's

BCSE-Base Case System Evaluation (BCSE)

Abstract

The aim of this study is to assess whether existing information technology has impacted financial statement audit quality. In addition, the researcher isolated fundamental concepts of auditing such as, IT based audit sample, audit risk, materiality decision, information asymmetry assessment and non-audit service. To respond to the above-mentioned subject, ten Ethiopian audit firms have been chosen based on convincing judgmental sample approach in establishing pre-criterion by Client numbers and firm size. While, to improve the quality of information for testing the series research hypothesis. In this study, both quantitative and qualitative (mixed) research methods are used. As a result, primary data from Semi-structured closed-ended questionnaires has been collected and evaluated. Data derived from questionnaires that have been analysed using the statistical package. However, the data obtained from interview has been analysed in words. Finally, the results of ordered regression model depicted that except IT based non-Audit service sampling, risk assessment, materiality decision, information asymmetry analysis has depicted positive probability coefficients in 5 % significant level. As a result, this sends a strong message to existing and entrant audit firms, as well as the AABE, that IT-based financial statement auditing is critical to improving Ethiopia's current state audit quality.

Keyword: *Information technology (IT), audit sampling, audit risk, materiality, information asymmetry and NON audit*

Chapter one

Introduction

This chapter introduces the research topic: The impact of information technology in financial statement audit quality the Case of Ethiopian external audit firms. Also, described the general background of external audit firms and defines, objectives and the problem definition of the research. The final section of this chapter includes significance of the study and overview of the content of the research.

1.1 Introduction

The purpose of audit is not to provide absolute assurance. But, based on reasonable assurances whether annual financial statements are free from material misstatement. According to (Balwani, 2013) auditing is considered to be a control mechanism to safeguard shareholder interests and reduce information asymmetry in other areas to ensure that the audited financial reports are considered to be free from material bias. Also, the auditors provide guarantees to minimize the risk of material misstatement that financial reports are prepared in accordance with established principles. The extent to which users of financial statement can rely on an audit opinion depends on the quality of the audit carried out. In addition, audit quality debates stem from business and other related Failures around the world have raised concerns about the reliability of the financial repository, both for investors and for many companies under pressure to accept the results of audit opinions. This applies to both investors and for many companies was pressure to decide to accept the results of audit opinions. Furthermore, the study regarding audit quality will an ingredient for several stockholders such stability of capital markets, for wider research that has been done on the subject, regulators, investors, composition, and the measurement of audit quality (deloitte, 2018 Audit Quality Report -, 2018) .

In the last decade, audit professions have constantly changing due to the complexity of the business, the large volume of transactions, and a tremendous amount of investment. One of the popular agency theories states that “the role of auditors is to reduce agency costs due to information asymmetry and competing interests between the two parties.” According to (Sulaiman, 2013) the reason that the agency theory, which concerns control and information, the asymmetry between

shareholders and managers is usually used in theory to legitimize the reason why corporate auditing is important in the modern economy.

Recently, Ethiopian has recorded five years of remarkable economic performance with an average annual GDP growth of 8.4% since 2016. While, it represents twice that of sub-Saharan Africa and triples the global average growth during this period and has led Ethiopia to be classified as one of the fastest-growing economies in the world (UNDP, 2014). In addition, after open market strategy adopted many domestic and foreign companies have been investing in service, agriculture, and industry sectors. Recently, worldwide trade is an opportunity for many countries to extract knowledge and to imitate information communication infrastructures that demanded 21 centuries. As a result, Ethiopian auditing firms has introduced IT assisted auditing in many types of assertion engagement. Ethiopia is one of those countries that consider ICT as a key driver of economic and social development and facilitator of good governance in all the sectors (Adam, 2013). The intensity of many businesses has been rapidly changing. On the contrary, income from other non-audit activity has a greater influence on the role of the external auditor is shifting in the non-audit. The study (Park, et al 2017) depicted that audit firms compromised audit quality since income from consulting services higher than from financial audit assurance services. Although, (Assaye, 2016), (Park, Hong j, & Joonhei, 2017) (Khasharmeh et al,2018) studies concludes high-level non-audit-related activities have a significant effect on the quality. Also, evidence from many foreign country's studies like (Anas, Ali Al, & dr,ahmed, 2013), (Banker, Hsihui Chang, & Yi-ching Kao, 2002) (JB, 2015) conclude that IT could have both a positive and negative impact on the quality of financial statements. As far as concerned of researcher knowledge, in Ethiopia there is lack of sufficient study have been made on financial statement quality. Therefore, to fill the gap, this study motivated to assess the impact using information technology in audit sampling, materiality, and independence and non-audit service will be analysed taking into account the existing information technology. According to (AABE, 2020) more than 150 audit firms were registered to give assurance expected from various stockholders. So that, to answer the research question; the researcher has isolated the potential variables, either positive or negative impact on the quality of external audit in the case of Ethiopian private audit firms.

1.2 Background of the study

Audit Quality is a complex subject and no analysis of it has achieved universal recognition. Due to limitless need of society needs, rapid technological change and economic development auditing profession is rapidly changing. In the last three decades, audit quality is a controversial issue around the globe due to the inconsistency and collapse of many audited companies. Audit quality is a widely researched topic but remains a complex concept that is difficult to quantify, which is why it is have developed several different proxy measures (Riel et al,2014).

The current shape of audit is the result of three large reformed periods granted in Ethiopia. The period before 1974 was the time when the foundation was laid for the development of accounting and auditing. During this time, the majesty of him the emperor Haylesilase introduced many corporations and banks. The history of accounting in Ethiopia in made on the 1960s. First, the Ethiopian Commercial Code was proclaimed in 1960 (Government of Ethiopia 1960). This Code contains provisions on accounting and external auditing, which still serve as the legal basis for financial reporting and external auditing of companies (world bank, 2007). After 1974 - 1991 revolution periods, a military party government with socialist ideology was control power in Ethiopia in 1974. Then private companies were nationalized and the number of state-owned companies in the country increased. As a result of these changes, the international public became the auditing firms Price Water House Peat & Co. and Mann Judd & Co closed their Ethiopian offices (Mihret & Kieran, 2009).During this period, the internal audit is seen as the dominant strategy rather than the external audit. After Post 1991, Ethiopia returned to a market economy system after 17 years of structuring as a command economy. This relocation resulted in the privatization of several public companies. The resulting new corporate governance structure in the private sector should improve the importance of financial reporting and external auditing. During this time, the Ethiopian government initiated numerous economic reforms. In addition, external auditors are viewed as a strategic entity as part of a government audit to ensure that all economic activities are of expected quality (Mihret & Kieran, 2009).

In 2014 accounting and auditing standard board was established as an autonomous government organ having its own legal personality in proclamation - No. 332/2015 (FEDERAL NEGARIT GAZETTE, 2015). The objective of the board is to promote the quality of accounting and auditing services etc.

According to (AABE, 2021) After a strict recruiting process more than 157 licensed external audit firms was registered. In addition, only a few of them are structured in a partnership company format to provide better service. The level of each firm and quality are measured in market rather than AABE requirement. Some of the firms have been operating for the last 20 years locally as well as in Africa. Most of the audit firms are also engaging other non-audit services such as consulting, tax planning strategy, forensic auditing, and liquidation. In the past few years, the finding of many academic pieces of research suggests that the fee of non-auditing revenue was exceeded the audit fee. Due to this, the quality of the audit was compromised (Park, Hong j, & Joonhei, 2017).According to (worldbank, 2016) the rapid growth of Ethiopia's economy has been attracted too much investment locally and domestically. Due to this the variety and volume of transactions in many sectors such as service, production, and construction sector have dramatically shifted. Many global audit firms including Ethiopia, information technology has been adopting to assist the overall audit process. Therefore, the primary reasons for conducting this study to assess, whether information technology is a significant impact on the quality of financial statements. Furthermore, the study also assesses to what extent IT based materiality decision, information asymmetry assessment, audit risk, audit sampling, and non-audit service are impacted audit quality.

1.3 Statement of the problem

The main objective of financial statements audit is to give an opinion whether the financial statement is free from material misstatements. However, due to globalization and the rapid movement of information technology advancements, the quality of auditor assurance has been suspected in the business community. According to (AnnaCarin & Maria, 2017) digitization brings both opportunities and challenges for the accounting profession. While, in Ethiopia Digitization have been a new strategy for various industries. Recently, many companies who operate in Ethiopia suffered large volumes and a multitude of transactions in daily business operation (CSA, 2015). Although, after digitalization period many academic journals have been studying on the consequence that the concept of materiality decision, information asymmetry, the sampling inspection and the procedure for determining evidence has to be redefined due to the enormous volume of data and the diversity of data.

In contrast to other countries in Ethiopia, there are no legal provisions for service organization that carry out certification for quality assurance of audits (Nebiye, 2017). Also, the turbulent events of the global financial crisis have underscored the critical importance of credible and high-quality financial reporting (IFAC, 2004). In the last three decades, there has been several attempts to define “audit quality”. However, none has resulted in a definition that has achieved universal recognition and acceptance because Audit quality is complex and multifaceted concept. According to (IAASB, 2014) Audit quality is a combination of input, interactions, output and legal factors. But, the studies (Banker et al, 2002), (Anas et al, 2013), (JB, 2015) related to the relation between IT based audit and quality depicted that, either negative or positive result emerged. In the context of Ethiopia, regarding the knowledge of researcher’s there is lack of sufficient studies and quality assessment has been conducted on the impact of information technology in financial statement audit quality. Therefore, the researcher motivated to undertake the study and found relevant conclusions in order to maximize the current state of financial statement audit quality. In addition, this project focused on the following research question:

1. What is the relation between IT based audit process including materiality decision, information asymmetry assessment, audit sampling, audit risk and non-audit service on financial statement audit quality?

1.4 Research question

1. What is the relationship between IT based in audit sampling and financial statement audit Quality?
2. What is the correlation between IT based audit risk assessment on financial statement audit Quality?
3. What is the interrelation of IT based materiality assessment (internal control assessment) on financial statement audit Quality?
4. What is the correspondence between IT based information asymmetry analysis on the impact of financial statement audit Quality?

5. What is the relation between IT based non-audit service on the impacts of financial statement audit Quality??

1.5 Objective of the Study

1.5.1 General objective

The overall objective of this study is to assess the impact of information technology on the financial statement auditing quality Ethiopian accounting firms. The study is based on specific determinant factors that significantly influence the quality of external audit.

1.5.2 Specific objective

1. To appraise IT based audit sampling selection in financial statement audit quality.
2. To examine IT based audit risk decision in financial statement audit quality.
4. To assess IT based materiality decision decisions on financial statement audit quality.
3. To examine IT based information asymmetry decision in financial statement audit quality.
5. To appraise IT based non-audit activity in financial statement audit quality.

1.6 Research hypothesis

After reviewing the literature that covered the topic of audit quality, the following hypotheses were developed by the researcher in order to meet the study's objectives:

Generally, using information technology during financial statement assertion is positively related to auditing quality.

H1: IT-based audit sampling decisions is positively related to financial statement audit quality.

H2: IT- based audit risk decision is positively related with financial statement audit quality.

H3: IT- based materiality of auditor judgment is positively related with financial statement audit quality.

H4: IT-based information asymmetry assessment is positively related with financial statement audit quality.

H5: Using information technology in non-audit activity is positively related to financial statement audit quality.

1.7 Scope of the Study

In order to aware of the readers, it's important to explain the study boundary and direction. The study focused at how existing information technologies have influenced the quality of financial statement audits. IT based Audit sample, audit risk, materiality decision, information asymmetry, and non-audit are separate variables to answer the research question. In addition, the focus of this study has only on grade "A" licensing external audit firms rather than internal auditors and compline audit. Also, a cross-sectional study is applying to answer and describe how far the probabilities auditing activity reacted in adopted existing information technologies such as integrated computers, audit software is associated on financial statement audit quality.

1.8 Significant of the Study

The expectation and perception of audit quality is increasing, while the auditing profession has been falling under pressure. Therefore, the finding of the study will be an ingredient for the many stockholders. For instance, for entrant researchers, regulators like AABE, for policy maker's national bank, for government body ministries of trade and investors can be applying for their sound decision making. In the Ethiopian context, the audit profession has been contributing many roles in macroeconomic level and micro, such as shareholders, investors, creditors, union societies and other beneficiaries. To improve the profession, it is important for the audit profession to keep up with the IT environments required to ensure the effectiveness and maximize the integrity of audit opinions to protect the above Ethiopian firms from financial crises and bankruptcy of Ethiopian companies. In terms of researcher knowledge, there is no single framework that defines the determinant of audit quality. Therefore, the study results will be used as a reference in the library and will provide an indication of knowledge in this area for further comprehensive and in-depth studies.

1.9 Structure of the study

The content of the study organized into five chapters. Chapter one included an introduction, a brief background about the study and a problem statement will be a major content under this section. In the second chapter, a literature review will cover most of the section. In the final section research gap and graphical presentation conceptual framework has discussed. The review includes the theoretical review in its first section which is followed by the review of the previous studies related to the area is part of this section. Chapter three presents the research design and methodology. This is followed by an analysis of the results and the discussion part of the paper concurrently covered in chapter four. The final chapter depicted the conclusions and recommendations made by the study.

1.9.1 Limitations of the Study

There is some limitation the researcher anticipated regarding the study. First, it is always difficult to measure auditing quality based on primary data. Naturally, audit quality is combination of many factors rather than limited proxies. Therefore, the problem regarding audit quality will not be fully resolved in this study. However, some expectations could be met. Second, there is a lack of sufficient data on the IT based audits quality of financial statement in Ethiopia. Therefore, the hypothesis ground of this study used some assumption.

1.9.2 Ethical considerations

This study used many published sources, scientific journals and books. Therefore, data obtains from many sources has cited in the academic policy and each participant's data quality and performance must be kept strictly confidential. In addition, results have reported fully and honestly, without misrepresenting what has been done or deliberately misleading others about the nature of the performance. Good research practice provides confidentiality or anonymity as this will make participants more open and give more honest answers.

Chapter Two

Literature Reviews

Introduction

The chapter begins with a definition of audit quality and external audit and follows the evolution of audit, discussion of quality regulatory bodies and components of quality external audit services. On the theoretical reviews, various audit theories, and current issues related to how information technology has affected the financial statement audit process, audit risk and non-audit service has discussed. Works which have been forwarded by previous researchers related to external auditor's quality, services provided by external auditors, audit quality, and assessment of quality external audit services has discussed. In the last section, the researcher identified knowledge gap and conceptual framework.

2.1 Theoretical reviews

2.2 Audit quality

In the last decades, there is no universally agreed definition of audit quality and agreed on the pure measure or determinate of audit quality. Different researchers were made a different definition for audit quality; the widely used definition used by most researchers based on De Angelo's (1981) definition of Audit quality. According to his definition, the main element of audit quality is the combination of the following two factors such as the Auditor's capacity to identify material misstatement and auditor independence during the whole process. Also, the whitepaper states that "there have been several attempts to define audit quality in the past; however, none of those definitions has achieved a universal recognition and acceptance (white paper). Recently, a popular framework was developed by capturing the relationships between the elements: context, inputs, outputs, and interactions. Inputs are divided into three groups: "(a) values, ethics and attitudes of individual assessors; (b) the knowledge and experience of the assessors and the time available to them to conduct the assessment; and (c) the effectiveness of the review process and quality control procedures. "The results are "often determined by the context, including legal requirements "and can be influenced by stakeholders. "For the stakeholders of some companies, the auditor's report is the most important result, and it is relatively standardized.

2.3 Evolution of auditing

The evolution of the auditor profession has been a theme expressed by the business community and scholars since the last decades. Basically, the process includes traditional methods and how it looks under the industrial revolution and the presence of a digital revolution.

The word audit is derived from the Latin word *audire* which means to hear. Auditing is a social phenomenon that has no purpose or value except for its practical utility and its existence is totally utilitarian. During this period the function of audit has evolved in response to a perceived seeking information or assurance about the conduct or performance of others in whom they have a legitimate and recognized interest. There is evidence was found on Auditing in the form of ancient checking activities in the ancient civilizations of Egypt, Greece, and China (Around 350 B.C). Also, and the ancient checking activities found in Greece (Teck et al, 2008).

According to (Azham et al, 2008) the practice of auditing was not firmly established in Britain until the advent of the industrial revolution in the 1840s to 1920s. The form of business came to in the form of huge factories and machine-based productions were established. As a result, a tremendous amount of capital is required to make this enormous amount of investment possible. The concept of materiality and the sampling method was used in testing during this period. The development of the materiality concept and sampling technique was due to the extensive transactions associated with running large companies in widely spread locations. It is no longer practical for auditors to review all transactions. Developing a materiality judgment was essential.

The world economy continued to grow in the 1960s and 1990s. This period was an important development in technological advancement, as well as the size and complexity of businesses. Auditors in the 1970s played an important role in enhancing the credibility of financial information and in promoting the business of an effective capital market. In early 1980 there was an adaptation of the auditor's approaches that turned out to be an expensive process to evaluate the internal control systems, and the auditors began to limit and make greater use of their system work, an extension of which was the development of risk-based auditing in the middle of the year 1980s (Turley & Cooper, 1991). Risk-based auditing is an audit approach in which an auditor focuses on those areas that are more likely to contain errors. To apply the risk-based audit, auditors need to have a thorough understanding of their audit clients concerning the organization, key personnel, etc., and their industries (Ali, et al 2008).

Between the periods 1970-2000, it was the beginning of the market for personal computers and many applications. According to (Porter ,2005), most companies in this period had introduced computer systems to process their financial and other data, and to perform, monitor, and control many of their operational and administrative processes. Currently, the final objective of the audit is to give credibility to the financial and non-financial information provided by the administration in the annual reports; however, audit firms have largely provided consulting services to companies. Regulators in the auditing profession and the investing public began to doubt that audit firms could remain independent on audit matters when firms were so reliant on consulting revenue.

The quality of the audits is coming under scrutiny following a series of financial scandals from public companies such as Sunbeam, Waste Management, Xerox, Adelphia, Enron, and WorldCom. The collapses of these giant corporations had caused a crisis of confidence in the work of auditors (Boynton & Johnson, 2006). As a consequence of the high level of litigation and criticism against auditors, almost all large accounting firms divided their consulting branches into separate companies and made announcements about their stricter rules and measures to ensure better independence. Quality of audit is an existing problem in many academics and the business community. Besides, a series of radical reforms were carried out in several countries, by accounting bodies, governments, stock commissions, and academics to strengthen auditing practice. Recently, fourth digitization has been launched around the globe. In fact, many business environments have been changing rapidly. According to (Byrnes et al , 2012) “Future audit approaches would likely require auditors, regulators, and standards setters to make significant adjustments. Such adjustments might include (1) changes in the timing and frequency of the audit, (2) increased education in technology and analytic methods, (3) adoption of full population examination instead of sampling, (4) re-examination of concepts such as materiality and independence, and (5) mandating the provisioning of the audit data standard. Auditors would need to possess substantial technical and analytical skills that are currently not components of most traditional four-year university accounting programs.”

2.4 External (CPA) Auditing Firms

The title-certified accounting firm reflects the fact that auditors who deliver audit opinions on financial statements must be licensed as CPAs. According to (ARENS et al , 2012) the definitions of external audit are that a neutral and independent person of the entity reviews the books and

records of a particular establishment and issue a technical report on the auditor's opinion on the validity and fairness of the financial statements. The certified accounting firm by title reflects the fact that auditors who issue audit opinions on financial statements must have a CPA license Called external auditors or independent auditors to distinguish them from other types of auditors such as internal auditors (ARENS et al, 2012). In Ethiopia, post-1991 market economy was opportunity for the enhancement of accounting and auditing in the state. That could be exploited by aspiring professional groups.

According to (AABE, 2010) To be an audit company, one must meet the following prerequisites: Any auditor must be ACCA-licensed and have at least two years of experience called compliance requirements. Second, a previous organization's clearance form must be delivered by an auditor. Finally, any auditor should deliver house rent contract for his planed audit firm based on minimum requirement.

Ethiopian government was established Ethiopian audit and accounting board to insure, issue its own examination and quality requirement directives; institutions or bodies to enhance the standing of the auditing profession and professionals both nationally and internationally (NEGARIT GAZETTE, 2014). According to (IFAC, 2014) non restricted Audit services include:

- Opinions / audit reports on other information provided by the company upon request from a third party (e.g., a prospectus, comfort letters, royalty audits, or a report on employee benefit plans),
- Opinion on the entity financial statements including balance sheet, Income statement and cash flow are free from material misstatement.
- Sustainability reviews and audits
- Advice on accounting policies
- Tax advisory

2.5 Auditing theory

There are many different theories that may explain the way audit service has been demanded. Some of them are well known in research and some of them are two idealistic not practical. In this section, only three popular theories are such as police theory, Lending credibility theory and agency theory are discussed.

The police theory holds that the investigator is responsible for finding, detecting, and preventing fraud. This was certainly the case at the beginning of the 20th century. More recently, however, the main focus of auditors has been on providing adequate security and verifying the truth and fairness of fraud and the detection of fraud. However, fraud detection is still a hot topic in the debate over auditor responsibilities. Typically, pressure mounts to increase the auditor's accountability for fraud detection following events where fraud is discovered in the financial statements

Lending credibility theory suggests that the primary function of the audit is to provide credibility to the financial statements. From this point of view, the service the auditors sell to customers is credibility. Audited financial statements have elements that increase the financial statements User confidence in the figures presented by management (in the financial statements). It is assumed that users will benefit from increased credibility. These advantages are generally seen in the fact that the quality of investment decisions improves if they are based on reliable information (ITTONEN, 2010)

Agency theory seeks to describe a relationship in which one party (the client) delegates to another party (the agent). Besides, is about solving the problems in a relationship with conflicts of interest and risk classification when attitudes towards risk diverge (Eisenhardt 1989). An agency theory perspective also suggests that the principal-agent relationship may be associated with information asymmetry. The best known and most widespread examination theory is the agency theory of Agency theory. (Watts and Zimmerman 1978) says that the auditor is assigned in the willingness of both the third parties as well as the management. A company is seen as a network of contacts in several groups (suppliers, bankers, customers, employees, etc.) that make some kind of contribution to the company for a given price. The duty of the management is connecting these groups and contracts and tries to optimize them by the low price for purchased supplies, high price for sold goods, low-interest rates for loans, high share prices, and low wages for employees. In these relationships, management is the agent trying to get input from principals (bankers, shareholders, employees).

Signalling theory covers the area of information asymmetry and voluntary selection of auditors (Morris 1987). Signalling theory helps reduce information asymmetry. This reduction occurs when one party reveals information and transmits it to other people. The theory has been established and

related to the labour market, but it can be applied to any market that has information asymmetry problems. (ITTONEN, 2010)

2.6 Framework on Audit Quality

Research on audit quality is still unsatisfactory; some non-academic institutions have set different frameworks. After investigation and capturing several relationships, a comprehensive framework was developed by (IAASB, 2014). The Framework distinguishes the following elements such as Inputs, Process Outputs Key Interactions within the Financial Reporting Supply Chain Contextual Factors. The level of an audit firm, knowledge, skills, and experience of auditors, values, ethics, and attitudes of auditors are categorized under the Inputs section. Also, inputs usually influenced by the context in which an audit is performed, the interactions with key stakeholders and the outputs. For example, laws and regulations (context) may require specific reports (results) that affect the capabilities (inputs) of the ISSAB (2014). The audit process and quality control procedures affect the quality of the audit. According (PCEAB, 2013) audit firm's infrastructures, a leverage ratio of audit members, percentage of assessed client risk, technical competency, and size of audit firm as indicators of audit quality. Outputs include reports and information that are formally prepared and presented by one party to another, as well as outputs that arise from the auditing process that is generally not visible to those outside the audited organization. Finally, important interactions within the financial reporting supply chain and contextual factors such as laws and regulations as well as corporate governance can affect the type and quality of financial reporting and, directly or indirectly, the quality of the audit.

2.7 The five phases of an audit

According to (www.pwc.com, 2017) audit process can be summarized in five categories such as planning, Risk Assessment, materiality judgement, evidence gathering and reporting .The first planning activities include the formal acceptance of the customer by the audit firm, the verification of compliance with the independence requirements, the establishment of the audit team, and the implementation of other procedures Determine Art, Timing, and scope of procedures that must be followed to effectively conduct the audit.

Planning - Auditors use their knowledge of the business, industry, and the environment in which the company operates to identify and assess the risks this may lead to material misstatements in

the annual financial statements. These risks often require a high level of judgment and a high level of knowledge and experience on the part of the auditor, especially with large and complex assignments. This requires a good understanding of the business and its risks, which are usually built up over several years as part of the knowledge of the accounting firm and the auditor. This also means that the auditors must be well informed about the industry and the environment in which the company operates, as well as about the activities of its competitors, customers, suppliers, and - if relevant - regulators.

Materiality Assessment: As soon as the risks are assessed, the auditors develop a general audit strategy and detailed audit plan to address the risks of material misstatement in the financial statements. This includes the development of a test approach for various financial statements. Decide whether and how much you rely on the company's internal controls, create a detailed schedule, and assign tasks to members of the audit team. The audit strategy and plan are continuously reviewed and adjusted during the audit to respond to new information that has been received about the company and its environment.

evidence gathering - Auditors use professional skepticism and judgment when collecting evidence and evaluate this is done through a combination of auditing the company's internal controls, tracing the amounts in the financial statements and information on the company's supporting books and records, and obtaining external third-party documents. This includes examining the key statements made by management and the assumptions that they used in preparing their annual financial statements. Independent confirmation may be sought for certain material balances, such as cash.

Finally, the auditors exercise professional judgment and form their overall conclusion, based on the tests they have performed, the evidence they have obtained, and the other work they have performed. The conclusion forms the basis of the audit opinion. Auditors interact with the company during all phases of the audit process listed above. There will be ongoing discussions and meetings with management, both at the operational and senior executive level and with those charged with the audit corporate governance, using their skepticism and professional judgment, the auditors question management's assertions regarding the figures and disclosures in the financial statements (P.w.c.com, 2017) .

2.8 Non audit service and audit quality

Many studies have examined how the quality of the audit is affected by an independent auditor the joint provision of audit and other services. However, the conclusions of these previous studies are not consistent and various interpretations have been suggested regarding the relevance between the audit service and the non-auditor provision of audit services since there is no consensus on the relevance between the audit service and the non-audit service provided by the same auditor. Many researchers have examined the possible reasons and focused on the endogeneity of the research design as a possible (Park, Hong j, & Joonhei, 2017) .

According to (Assaye, 2016) Study, provision of NAS does not negatively affect the independence of the auditor and the quality of the audit, if a firm and a client install mechanisms adequate safeguards such as audit companies and NAS by separate work team, separate departments, rotation of audit partners, etc. The last two decades have witnessed a wide expansion in the services provided by audit firms to include various non-audit services (NAS) and this was due to the expansion and complication of the business environment, globalization, expansion of multinational companies, and improvements in information technology. Today, companies receive NAS such as computer hardware and software installation, human resource planning, accounting, tax return preparation, investment banking, internal audit outsourcing, and finally management consulting services (Hussein, 2018).

According to (Chemed, 2016) the External Auditor is authorized to perform certain services other than financial statement auditing. In general, these Services are only allowed as long as the External Auditor does not actively participate in management decision-making or may result in a situation where the External Auditor will be required to audit his own work. Non-audit services allowed include Tax compliance work, aggressive tax position transaction recommendation, and various managerial decision-making consultancies, etc. However, bookkeeping, internal control designs, financial statement preparation, financial information systems design, and implementation are strictly prohibited (IFAC, 2004).

2.9. Information technology and the profession of auditing

Technology has improved the ability to capture, store, analysed, and process vast amounts of data and information, further empowering the business decision-maker. The need for better control over

IT, especially in commerce, has advanced over the years in previous years and ongoing studies have been made by national and international organizations. Essentially, technology has impacted several important areas of the business environment including the user and processing of information, the control process, and the auditing profession. Information Technology has also impacted the profession of Audit in terms of how audits are conducted (information capture and analysis, control concerns) and the knowledge required to conclude the operational or system effectiveness, efficiency, and completeness of the reports (Otero, 2018).

According to (Anas et al , 2013) the word of information technology means the use of modern technologies to manage and process the vast amount of data on political, economic, scientific, and social life. Information is the facts that result from data processing; therefore, there is a difference between information and data. Information is data that has been processed and allows its owner to make the right decision at the right time. It is a society that deals with information in a continuous, sophisticated, and efficient way. It has become known in our current age of information technology. When we talk about information, we mean information technology. The term Technology means the computer and related communications equipment and computer programs (software's) allow you to work in a standalone framework or network with other devices. Therefore, applying information technology in financial auditing is vital to maximize the degree of audit quality.

2.9.1 The effect if IT on auditing

The auditors' working methods have not changed completely. However, it is assumed that documentation and communication are easier due to digitization (Nearon, 2005.). The study of (Karlsen & Maria Wallberg, 2017) states that using digital tools to conduct the audit has simplified day-to-day work and enabled the auditor to get information from clients faster. Also, some auditors say the final audit was affected most within their working methods due to the lower presence of binders. The reviewer can take notes on a PDF instead of paper if he or she wants to work fully digital. However, there is no doubt that information technology has a significant impact on some, if not all of the above factors that affect the issue of determining audit fees, such as the impact of information technology on the timing or the period of the audit process in the direction of reduction, number and size of the audit team with which the audit work was carried out, and, ultimately audit fee relatively reduced due to IT impact (KAMIL, 2017).

It should also be emphasized that the electronic operation of the data helps the auditor to achieve better audit goals in order to achieve the following advantages: (Aalboni: 2011, p. 7) First: Helps through the speed of evidence in the output of financial and non-financial data and financial information that quickly identifies errors and enables immediate correction compared to manual operation. Second, the e-operation helps the auditor use comparative and ratio analysis techniques, and creates indicators and parameters to aid in quickly monitoring and evaluating performance. Thirdly, the electronic data operation assists the auditor in applying the internal information network system and the external information network in controlling the internal and external branches of the company. Finally, the auditor can use advanced operational research methods in analysis, evaluation and presentation of reports such as statistical analysis, control means, self-control, statistical sampling method and systems analysis method. In addition, the electronic operation helps in retrieving data and information stored in the memory of the computer or on memory modules and in memory, and this can verify some of the observations (omer et al, 2017).

2.9.2 Types of Electronic Auditing System

Many researches' journals study on auditing practice indicates that electronic work audit systems have the following types:

1. personal computer systems: so that the personal computer can be used in the management of financial operations performed in the establishment and possibility of Extraction of financial reports from the auditor and the administration, and the organizational structure of the institution is the basis in the degree of security of the use of personal computers in handling financial data and reducing risk.
2. Direct computer systems: The use of screens and a certain number of computers that are linked to the network of licensed access to computerized programs and allows the auditor to obtain the information that helps in the work of the audit report, and allows the programmers to access Direct computer systems for programmers to Modify or extend computerized accounting software.
3. Database system: Database refers to a set of data that is shared and used by several different users for different purposes. When using databases, external auditors need special information technology expertise to make appropriate inquiries and understand the implicit connotations of the

responses obtained. Data has two important characteristics: data exchange and data independence for application programs (Mohammed Alsharairi, 2019).

2.9.3 Information technology devises in audit

1 - General testing software. These types of software are computer programs or a series of computer programs designed to perform certain automated activities. These activities include reading the selected computer files, categorizing data, summarizing information, submitting accounts (calculations), sampling, and publishing reports in a manner determined by the auditors. If general auditing software is used, auditors should ensure that the employer's data and information are complete.

2- Application software tracking and mapping: These types of software consist of specialized devices for analysing the data stream by processing and documenting fundamentals, tracking, Control status, and processing steps. It should be noted that the use of these techniques only shows factors of processes and imprecise processes and does not evaluate actual data.

3 - Audit expert system: Audit expert systems also referred to as Decision protection systems are devices that are used by the auditors to help decision-making by mechanizing the knowledge of experts in related fields. When using these techniques, auditors should know the performance of the system to determine the accuracy of the tracking system follows.

4- Data test: Data test is the playwright of (represents) transactions used to test the nature of the processing, computation, and control of actual programs that can be used in the computer. These techniques include Full Test Tools (ITFS) and Basic System Assessments (BCSES). The use of this technique only reveals the possible reasons for error processing and does not evaluate real-world information.

5- Utility Software: This technique can be used for information processing activity tests, program testing, system activities, and methods used, data file activity evaluation, and data analysis checking. While using this technique, auditors should control accessibility and the unplanned impact that can occur during processing (Zeinab et al ,2013).

2.9.4 The Impact of Information Technology on Audit Risk

The American Institute of Certified Public Accountants (AICPA) in Standard No (47) indicates that audit Risk (AR) is the risk that the auditor will not give an adequate and appropriate opinion on the financial statements that contain material misstatement. Audit risk is also defined as the possibility that an audit opinion is incorrect on the audited financial statements because the auditor does not identify material errors that may exist in those statements or the possibility that the auditor expresses Unqualified Opinion on Financial Statements Containing Material Misstatement. Audit risk is an important factor for the auditor to consider, whether in planning an audit, determining audit procedures, or evaluating audit evidence is in line with certain procedures.

The Institute of Chartered Accountants of America No (47) has emphasized the need to assess risk when planning to check on a standard that the auditor should plan the audit in such a way that, the audit risk is minimal and appropriate for a proper audit opinion in the audited annual financial statements and the risk can be assessed either in numbers or quality. Audit risk also relates to residual risks arising from the audit Issuance of an unqualified report by the auditor due to the auditor's failure to disclose material misstatements or due to errors or fraud. These risks consist of inherent or material risks (Ali, 2017).

2.9.5 Audit quality paradox

The origin of contrary qualities concept merged on before 2000 (B.C). According to Aristotle, the father of philosophy, quality is a logical work and something that cannot be categorize. He goes on to say that qualities are hylomorphically–formal traits like "white" and "grammatical." State categories like "shod" and "armed" are also non–essential characteristics. On the other hand, according to renowned philosopher John Lock, a quality is an idea of an experience or a perception. Locke further asserts that qualities can be divided in two kinds: primary and secondary qualities. Primary qualities are inherent in an object—a thing or a person—while secondary qualities are determined by the subjective mode's interpretation and the context of presentation (wekipidia, 2021). Furthermore, the meaning of the quality idea has varied depending on the type of business, such as manufacturing, physics, data quality, and service quality. According to (Azene, 2016) In the manufacturing industry, ISO 9000 has established a quality award and method since last two decades. In service sector, due to the inherent intangible nature of services, which are often

experienced subjectively, scholars have historically viewed service quality as extremely difficult to describe and quantify (wekipedia, 2021). Recently the so-called Nordic School was one of the first to wrestle with the concept of service quality. Service quality was viewed as having two basic dimensions in this approach such as technical quality and Functional quality: Technical quality refers to what the client gets as a result of their interactions with the service provider. Functional quality refers to how a consumer receives a service and the expressiveness with which it is delivered (wekipedia, 2021). Audit quality has been serviced based concept on the aforementioned premises, and it is still a contentious subject in the corporate community (Gary A. Giroux et al 1992).

2.2 Empirical Literatures

(Anas, Ali Al, & dr,ahmed, 2013) Was studied the “Impact of Information Technology on the Auditing Profession “. In order to fulfil the research questions the researcher has evaluated the efficiency of auditing by using information technology as a proxy. while, the study focused on how computer system efficient in the review verification and estimation, Test the consistency in the Accounting, recalculates the value of some elements & the basic audit process such as Statistical Samples & Comparisons and Extraction of the Accounting Ratios. The result of the paper suggests two opposite results. First, information technology in the process of improving the efficiency of audit has a negative effect on the quality. On the other hand, the use of information technology in various fields of auditing will help to improve the efficiency and effectiveness of the review process, despite the existing problems that impede embarking to make serious decisions to exploit information technology leads to improved efficiency and effectiveness.

(Vanbutsele, 2018) Was carried “The impact of big data on financial statement auditing”. According to study, the reason for doing the study was to understand the changes that are being observed in the auditing profession due to the proliferation of big data. Second, assess the readiness of the Belgian auditing profession for these changes. To investigate the impact of BD and BDA on the auditing professional companies he asked four he interviewed four large corporate respondents. According to the study, 50 percent of the four largest international professional services networks are covered with his convenience sampling strategy. Primary data result depicted independence; materiality and sampling must be reimagined in the context of big data. IN general, he concludes, the use of BD is similar between all interviewed parties. However, each

of them takes a completely different approach to data extraction. Some audit firms do the extraction themselves. Finally, almost all respondents have a positive response, but they stated that the implementation of big data must have complied with strict external regulations and methodology.

(Mohammed Alsharairi, 2019) Was Conducted empirical analysis “The Impact of the Use of Computer Technology and Auditing Software on the Efficiency of External Auditors in Jordan”. The study aims to determine the effects of using electronic tools on the work environment to increase the efficiency of external auditors. The questionnaires were distributed to a random sample of the auditor offices that carry out the electronic examination process both within the office and in the audit firms. Statistical methods such as the Cronbach alpha test were used to determine the degree of internal consistency of the sample members .regarding the study result, the presence of computer technology and tools helps the external auditor to reasonably confirm that the data received for processing and the computer hardware technology helps the external auditor to test the means of control over the electronic system as well as to test the possibility of software in the processing of ordinary accounting data.

“Computer Assisted Audit Techniques and Audit Quality in developing country “were studied by (JB, 2015).The researcher used a sample of auditors from the whole of audit firms operating in Nigeria. The study selected a sample from many stockholders who made a decision based on audit opinions. Primary data was implemented by using self-administered questionnaires. The data were analyzed using correlation analysis and multiple regression analysis using SPSS. The study selected a sample of investors based on audit opinions. The primary data were processed using SPSS and calculated descriptive statistics. He also performed correlation analysis and multiple regression analysis. The final section of the Hypotheses test demonstrated the use of CAATs and audit quality was positively correlated & local Nigerian firms are not effective in applying computer assist in audit technique.

The study on "Impact of information technology on the productivity of public accounting companies" was carried out by (Hsihui et al, 2002). The lack of research regarding the problem specifically in the United States is a motivating force for the study. The researcher applied both qualitative and quantitative to estimate auditor productivity using IT. The reason of the study is haw rapid economic development has been influencing a driving force to adopt audit software to promotion of audit efficiency and effectiveness, using software package can lead to reducing costs

of auditory institutions and using audit software can lead to reducing costs of auditory institutions. The study is used simple sampling method to select 64 Iran audit institution. The result depicted there is a statistical significance of IT impacts when examining quantitative data both parametric (regression analysis) and non-parametric (DEA) estimation methods were used to test for differences in firm productivity before and after IT implementation in 1998. The results of both methods indicated a significant improvement in productivity after the adoption of IT.

On 2011 (Sulaiman, Audit Quality in Practice, 2013) was studied Audit Quality in Practice: Examining the Views of Examiners, Members of the Examination Board and Quality Inspectors for a Doctorate from the Humanities Faculty of Manchester Business School. The researcher wishes to provide an understanding of the concept of audit quality tools to a number of parties responsible for ensuring, appointing, or assessing audit quality in practice: auditors, board members and quality inspectors in relation to audit quality. Furthermore, The study also analysis the possible conflicts between some of these constructs of audit quality and the potential for problems in audit quality in practice. Document analysis methods, semi-structured interviews, and a questionnaire were used to answer the interpretive approach to the problem. Associated with the characteristics of each auditor, in particular the auditor's interpersonal and behavioral skills, the characteristics of the audit firm (size and specialization of the sector) and the quality of financial reporting was finding significantly related with audit quality. However, some respondents stated that interaction and communication with external reviewers affected the quality of reviews, rather than the factors mentioned above.

On 2013 public company accounting oversight board (PCAOB, 2013) was released a result of standing advisory group meeting on the discussion of –audit quality indicators after the discussion audit quality. The aim of the paper is to prepare for discussion of audit quality indicators (AQI), which the staff defines as metrics that provide insight into financial statement audit quality, for regulatory processes and policy making with additional insight into the status and trends of audit quality and Provide firms with additional incentives to compete based on audit quality. For instance, Rate of usage / workload of partners and employees, industry experience and skills, RTD technical resources, and RTD technical resources classified in the input sub -sections. In the process part, the percentage of customers who are at high risk, the company's investment in infrastructure to support quality reviews, the number and extent of auditor resignations, and the

other factors also depicted. Finally, in the results area. The number of material shortcomings reported in connection with material misstatement, the number of audit reports in which no going-concern opinion was expressed and which led to subsequent failure, the frequency and impact of balance sheet adjustments on the market for factors identified to enhance awareness of business community and regulatory body on the quality audit.

2.2.1 Study in Ethiopia

(Fekede, 2015) Was carried “The Current Status of Professional Ethics and Independence of Private Audit Firms in Ethiopia” According to the researcher the aim of the study is to examine the professional ethics and independence in Ethiopian audit firms. The study was used in both primary data and secondary data to assess the existing problem. The problem of the study was investigated based on the benched mark of International Ethics (IESBA) ethical standard. Also, the researcher was using a few distinguished variables derived from previous pieces of literature such as, what are fundamental principles of ethics are highly violated and not properly implemented in the private audit firm environment. Finally, the finding of the study depicted most of the private audit firms do not comply with professional ethics and lack independence from their client.

In addition, (Chemed, 2016) was studied a master’s dissertation on “The Assessment of Quality External Audit Services”. Basically, the study focused on Grade’s ‘A’ Private Audit Firms that operate in Ethiopia. The objective of the study was to answer why audit firms sometimes compromise audit quality and the implications of compromising on audit quality for the profession. In the study, auditors, company managers, and senior auditor’s total of 30 respondents have involved in purposive sampling. The finding of the study depicted a majority of respondents’ perceptions grades ‘A’ authorized private audit firms are significantly compromised audit quality and not independent during their audit work.

(Kitata, 2016) Was studied "Factors affecting the quality of external audit" the researcher analysed potential factors affecting the quality of external audit in the commercial bank? According to the study, specialization in the banking sector, the long-term relationship between auditors and client, the size of the bank and the bank's leverage position are proxies that indicate the quality of the audit in the banking sector. The researcher applied the design of quantitative approach to respond to the problem of the study. The sample for the study consists of 8 private banks. After analysed

the secondary data, the study concludes the quality of the external audit in banks positively related to the size of the bank and negative to the audit fee paid by the bank. Others were not confirmed empirically.

(Nebiye, 2017)) Was carried out "The determinants of the quality of the external audit. The objective focuses on the study are audit companies operating in Ethiopia. According to the investigator, independence, audit experience, accountability, audit fee, the size and regulation of the company were an indicator of the quality of the external audit. Out of all external audit firms operating in Ethiopia, the study used fifty and two audit firms based on convenience sampling. Multiple Regression depicted that independence, experience, accountability, and regulation are statistically significant factors influencing the change in audit quality in Ethiopian external audit firms and the audit fee is significant in 10%, while the size of the audit firm is not a significant factor that has little or no impact on the quality of the audit of Ethiopian external audit firms. Finally, the investigator recommended that the body concerned not ignore the overcoming of the findings of the study, especially for the Ethiopian accounting and audit board (AABE).

(Feleke, 2017) Was studied "perception of audit quality auditors in Ethiopia" The objective of the study was to know the state of auditors' perceptions in financial statements audit quality. The researcher identified, tight audit time, audit tenure, and provisions of non-audit services with audit quality and enterprise size, audit capacity are variables for testing audit quality. Based on primary data audit staff, managers, and owners were involved to respond the research question. The finding of the study indicated that respondents agreed on the positive relationship of the size of the audit undertaking, the audit competence, industry specialization, and auditor's reputation with audit quality. Tight audit time is negatively related to audit quality. Respondents are neutral concerning the provisions of non-audit services with quality audit.

(Assaye, 2016) was studied" The Impact of Provision of NAS to Audit Clients on Auditors Independency and Audit Quality" The aim of the research is to see whether non-audit services have a negative effect on audit quality. The study is focused on information given by employees of eight Addis Ababa-based private audit firms. According to the result non-audit service is a fantastic opportunity Providing auditors with more business knowledge and access to the client's accounting system while also maintaining audit efficiency. But, division of the engagement teams, must be made in seniors audit manager.

2.3 Research gap

Generally, Audit quality has been studied in the last three decades by many researchers around the globe but there is no Existing universal agreed definition and measurements. The theoretical background of most study has been on IAASB (2011) framework about audit quality. Under the frame, audit quality defines, all possible influences of audit quality which are categorized as: (1) Inputs, (2) Outputs, (3) interactions amongst key stakeholders are indicators for sound audit quality. Regarding researcher knowledge, developed countries have heavily studied audit quality comparing in developing countries. However, the finding of majority study depicted that there is likely to be information technology impacted oppositely or negatively.

In the context of Ethiopia, Prior researches have documented inconsistent results on the evidence of the linkage between audit quality and its determinant factors with a limited scope such as industry experience, tenure, audit fee, audit firm size, auditor's reputation, non-audit service, audit tight time and independency. Regarding researcher knowledge, there is no sufficient study that has been made in Ethiopia regarding the impact of information technology on financial statement audit quality. Therefore, this study has attempted to study the impact of using information technology in audit sampling; audit risk, materiality and non-audit service on financial statement audit quality. Furthermore, the output of this study will bring some contribution to certified audit firms, regulatory bodies, and business communities.

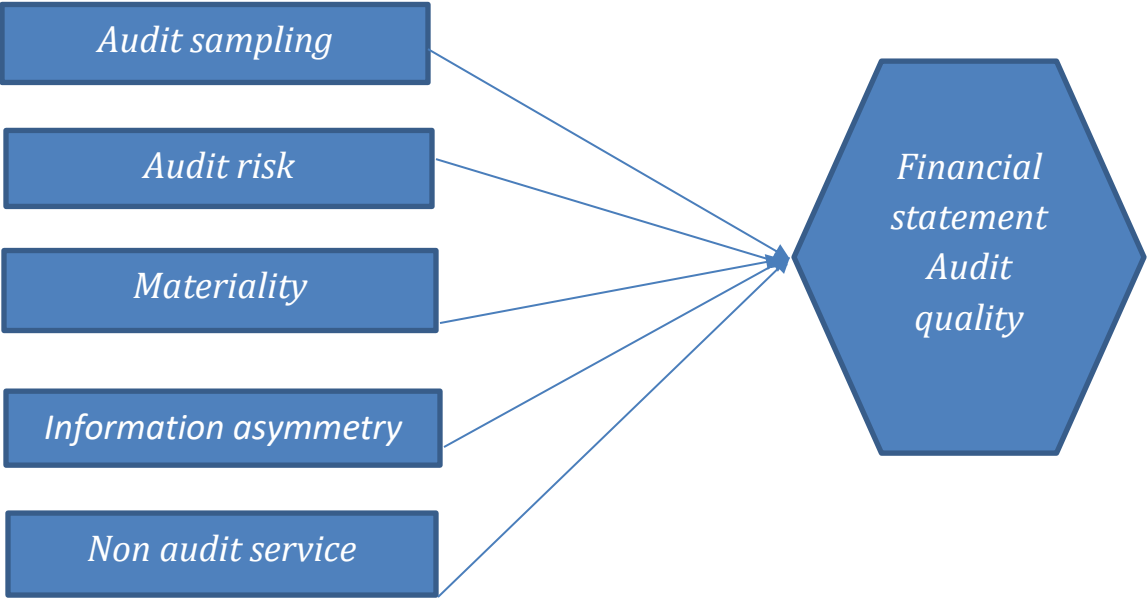
2.4 Conceptual Framework

Fawcett (1997) suggests that conceptual frameworks can be used to purposes to guide practice as a basis for research projects, for pedagogic purposes and in administrative situations. According to ISSAB (2014) conceptual framework, audit quality is a combination of input, output, interaction, and legal factors. Therefore, a boundary of this study is based on input factors that auditor's skill and ability to identify material misstatement using information technology. The remaining factors has not be discussed on this study in relationship between a dependent variable and an independent variable.

Therefore, this study attempts to isolated to what extent IT based audit sampling, audit risk and materiality decision and information asymmetry assessment and non-audit service has impacted financial statement audit quality.

Independent variables

Dependent variable



Own design based on Bayue Tegaw (2017)

Chapter Three

Research Methodology

Introduction

This chapter focused on methodologies used to carry out the research. The following content are organized under this chapter such as, research approach, target population, sample size and sampling technique and diagnosis of the data. Finally, brief description mentioned on how researcher draws a hypothesis in order to answer the aim of the study.

3.1 Research design

Many academic studies often performed based on following types of research designs such as: exploratory, descriptive, and experimental design. The primary goal of this research is to determine the relationship between IT-based audit techniques and the quality of financial statement audits. Second, the correlation between IT-based sampling, risk assessment, materiality evaluation, and non-audit service in financial statement audit quality was investigated in this study. Furthermore, the researcher realized that the mentioned variables are beyond the control of researcher. As a result, the researcher used a descriptive design to produce an accurate and valid depiction of (encapsulate) the characteristics or variables that relate to the study topic.

According to (Sekaran & Roger Bougie, 2016,) the goal of a descriptive study is to obtain data that describes the topic of interest. Descriptive studies are often designed to collect data that enables to description of many attributes (such as people, firms, products, or brands), events, or situations by using either in number or quality method. The descriptive study generally helps researchers to understand the characteristics of a group in a given situation, think systematically about aspects of a given situation, and give some indication to make certain (simple) decisions.

3.2. Research approach

Many social sciences, including business research's, have been carried out based on a quantitative, qualitative, and mixed approach. According to (Creswell & Wanqing Zhang, 2009) the quantitative approach is a means of testing objective theories by examining the relationship between variables. In turn, these variables can be measured. Usually on instruments so that numbered data can be analysed using statistical methods. The final written report has an established structure consisting

of an introduction. Survey research provides a quantitative or numerical description of trends, attitudes, or opinions of a population by examining a sample. It includes cross-sectional and longitudinal studies using questionnaires or structured interviews to collect data to generalize from a sample to a population. Also, it allows the testing of theories in statistical numbers, with built-in safeguards against bias.

The qualitative approach to research deals with the subjective evaluation of attitudes, opinions, and behaviours. Research in such a situation is a function of the researcher's perceptions and impressions. Such an approach to research generates results either in numbers way or in a way that is not subjected to rigorous quantitative analysis. Generally, in this approach focus groups, interviews, and in-depth interview tools are used (Kothary c, 2014).

The mixed approach is a mix of the two previous approaches to data collection. This led others to mix methods, and soon approaches associated with field methods, such as observations and interviews (qualitative data), were combined with cloth ended questioner (quantitative data). The mixed approach exists when researchers anticipate that any single method may Couse significant bias or limitation, while the mixed approach could neutralize or cancel out the biases of other methods (Creswell & Wanqing Zhang, 2009). The mixed strategy is a more appropriate technique for researchers to create the most information relevant to the study's goal. The mixing approach is used to improve data quality during the data gathering period, although it is interpreted independently. During the data collection time, participants were encouraged to participate in an interactive manner. Therefore, in this study the researcher applied a mixed approach to enhance the quality of information. therefore, data acquired from the interviewee has been prioritized and qualitatively assessed. But, data from cloth-ended question analysed thought in statistical numbers (quantitatively).

3.3 Target Population

A population means a characteristic of all items or a target interest for our study. Currently, there are 157 audit firms registered in Ethiopia under strictly recurring by accounting and auditors board of Ethiopia's. According to the pilot study, private audit firms differ in terms of size, experience, number of clients, and number of employees. As a result, the data collected and generalization of drowning in this study is limited to those who used information technology in the licensing grade “A” external audit firms in Ethiopia.

3.4 Sampling method

Depending on the nature and availability of the data, researchers can choose random sampling and non-probability sampling. In random sampling, each population unit has a probability of chance. However, non-probability assumes that the selection of the sample depends on the judgment of the researchers. According to (BRM, 2021) “Purposive sampling may be the only appropriate method available if there are only limited numbers of primary data sources who can contribute to the study”. A purposive sample refers to the selection of units based on personal judgment rather than randomization Sara Elder (2009). Judgmental sampling is in some way “representative” of the population of interest without sampling at random. One of the most common uses of intentional sampling is in studies based on a very small number of areas or sites. A maximum variation sample, which is sometimes called a maximum diversity sample, is a special type of purposive sample. The main objective of a maximum variation sampling technique is to select a sample that, in most cases, is more representative than a random sample. Note that a random sample is not always the most representative, especially when the sample size is small. Also, under method this method usually selects no more than 30 units. Therefore, convenience-judgmental sampling methodology has operationalized in this study due to the small sample size, empirical evaluation, and pilot test results.

3.4.1 Sample Design and Size

A sample is a part of a larger organism specially selected to represent the whole. The population for this study consists of all licensing external audit firms in Ethiopia. According to the Ethiopian auditing and accounting quality ranking, among the remaining audit firms, only very few are recognized as “A” Grade based on client size, company size, and market response. Furthermore, authorized Grade’s “A” Audit firms have a mix of qualified and experienced professional auditors, which are potentially strong and larger than the remaining firms. In addition, based on pilot test result a lot of Ethiopian big companies who suffering high volume and verity transactions including banks, producers, and NGOs have been audited in grade “A” firms using information technology. Therefore, in this study convenience judgmental sampling is applied from “A” licensed “based on pre-determined criteria. As a result, the researchers selected 10 External audit firms using convenience method from out of all registers 157 audit firms in Ethiopia. Also, 40

questioners will distribute and collect from Head of the Audit firm, Audit Manager, and Team Leader/ Senior Auditors and principal partners.

3.5 Data collection method

The Semi-structured interview is used priority to collect the details needed for a closed-ended questionnaire about how IT affects financial statement audit quality in Ethiopia. While, the questionnaire is created based on previous empirical literature and practical cases. Cronbach Alpha is used to assess consistency and reliability the of data. The closed questions have developed on a five-point Likert scale from 1 (fully agree) to 5 (strongly disagree). Some of questionnaires were created using literature as a source, and half of them are isolated from practical phenomenon. According to (Creswell & Wanqing Zhang, 2009) , a Semi structured interview gives the researcher considerable leeway to examine the respondents and to maintain the basic interview structure. Even if it is a guided conversation between researchers and interviewees – appreciable flexibility is offered to the researchers. A varied limitation of existing data regarding information technology and audit quality in Ethiopia leads factor to conduct an interview some elite audit firm manager.

Before applying for the researcher questionnaire to collect the data, the pilot test was conducted by selected (ACCA holders) experienced accountants and the Accounting and Audit Committee. The pilot aims to ensure the clarity of the questions and respondents will have no problem answering the questions on behalf of companies. So, the feedback from these respondents will not be a problem answering the questions. Because of availability of data and coved -19 viruses, Questions that distribute questionnaires collected through in online and in person using Google form. But, Semi- stricture interviews have conducted be made in person.

3.6 Data Analysis

The demographic profile of the respondents interpreted using descriptive statistics such that frequency and percentage distribution to make the analysis meaningful. A descriptive statistic used to present the data acquired in a structured, accurate, and summarized manner. A new version of the Statistical package for social science (SPSS have applied in the analysis of data. Data from questionnaires analysed and displayed in a meaningful tabular and other statistical package using

the SPSS package. However, the semi-structured interview data is analysed qualitatively in a meaningful paragraph summary.

3.7 Model Specification

According to (listen data,2020) ordered logistic regression model is used when the researchers faced the following scenarios. First, if the nature of study especially dependent variable couldn't be measured in arithmetic operation. secondly, when researchers use more than two categories of scale and more than two dependent results (dummy). Also, according to (Uma, 2014) topics regarding quality, attitude preference, and satisfaction are an ordinal (qualitative) scale data which is difficult to assign in numbers. So that, financial statement audit quality is not quantified in numbers, it is ordinal scale. Therefore, the data obtain from respondent systematically assigned and measured between “STRONGLY-AGREE “AGREE” “NEUTRAL” “DIS-AGREE”” STRONGLY-DIS AGREE “to measure financial statement quality.

$$\text{Log}(p/1-p) = a + b1*X1 + b2*X2 + b3*X3 + b4*X4 + b5*X5 + e,,,,,$$

P =probability of outcome financial statement quality

a = value of P if X1 +X2 +X3 +X4 +X5= 0

e=erred term indicates all influential factors which is not included in the model.

Table 3.1 ordinal regression model

Independent variable(coefficients)	Predicts	Model
Audit risk	Computer assist audit technique (IT)	<i>Log(p/1-p) =a + audit risk (IT)+audit sampling (IT)+materiality (IT)+ information asymmetry (IT)+NAS+(IT)+e,,,,,</i>
Audit sampling	Degree of usage (IT)	
Materiality	Degree of usage (IT)	
Information asymmetry	Degree of usage (IT)	
Non-audit service	Degree of usage (IT)	

Model adopted from OMONUK, JB (2015) and modified by researcher.

3.8 Reliability Testing

The diagnostic test is used to test whether the specified model is properly organized and to ensure that the common least square (OLS) assumption is violated or not. Basically, the diagnostic test includes:

- Weather **ordinal regression** model are conducted based on reliable data (Cronbach alpha test)
- **Model fitting information** error is dealing with whether the ordinal regression model is truly specified
- Any explanatory variables are consistent or proportional across the different thresholds, hence this is usually termed the assumption of **proportional odds proportional odds**.
- **Multicollinearity** assumes that the best regression models are those in which the predictor variables correlate strongly with the dependent (outcome) variable, but correlate - at most - only minimally with one another.
- **Normality test** assuming that the distribution of residuals is normal not skew and kurtoses. If all of the above assumptions are not materially violated, the regression is performed, as it is certain that this is the accuracy and precision of our estimate.

3.8.1 Odd ratio assumption

The assumption of proportional odds means that each independent variable has an identical effect at each cumulative split of the ordinal dependent variable. It is tested in SPSS Statistics using a full likelihood ratio test comparing the fitted location model to a model with varying location parameters. The key assumption in ordinal regression is that the effects of any explanatory variables are consistent or proportional across the different thresholds, hence this is usually termed the assumption of proportional odds (SPSS calls this the assumption of parallel lines but it's the same thing), (IBM, 2021).

3.8.2 Normality Testing

If the normality assumption is violated our hypothesis testing is not reliable. A normal distribution is symmetrical, bell-shaped. In this study, Shapiro-Will and Kolmogorov-Smirnov Test will be an ingredient to many others test in social sciences (software, 2018). According to Jeffrey M (, 2013

Skewness and Kurtosis are one of the main tools of measurement test for normality. Skew indicates one tail longer than the other (non-symmetrical). Kurtosis indicates too flat or too peaked (kurtosis).

H0: Error term is normally distributed

H1: Error term is not normally distributed

Decision Rule: Reject H0 if the p-value of test less than the significance level. Otherwise, do not.

3.8.3 Multicollinearity Testing

According to Jeffrey M (, 2013), multicollinearity occurs when the expected degree of correlation between the independent variable is high. In the presence of multicollinearity, our model encounters the following situations: -as misleading signs of the coefficients than researcher expected, Low t-statistics, and insignificant coefficients. The variance inflation factor (VIF) was used in this analysis to determine whether or not multicollinearity exists. Ones we identified an intolerable correlation between independent variable the researcher either transform a variable or drop a variable likely to cause omitted variable bias.

3.8.4 Auto correlation testing

One of the fundamental assumptions of liner regression model is an error(e) term which is cold constant is not significantly correlated is autocorrelation test. According to (Durbin-Watson, 2021) test statistic compares the null hypothesis that the residuals from a simple least-squares regression are not autocorrelated to the alternative hypothesis that the residuals follow an AR1 process. The Durbin-Watson statistic has a range of values between 0 and 4. non-autocorrelation is indicated by a value near 2; positive autocorrelation is indicated by a value near 0; and negative autocorrelation is indicated by a value near 4. As a result, the Dublin Watson test was used in this analysis to determine if it exists or not.

3.9 Hypothesis development

In order to achieve the objective of the study, the researcher developed five hypotheses. In this section, the researcher attempts to briefing the justification of haw those independent dependent variables are hypothesizes based on assumptions and other theoretical backgrounds.

3.9.1 Audit sampling and audit risk

Audit sampling and audit risks are the most important pillars of the audit process. In recent years, IT has switched the review process from the traditional exam to an IT exam. According to Mena Tarik (2017), large audit firms have made large investments in IT and developed computerized tools to support the audit process. However, smaller audit firms may not be able to compete with these large companies on IT investments during the audit process. In addition, Technological advances are one of the essential factors influencing the accountant and auditor profession. The study by (Meihami et al, 2013) concludes that there is statistical evidence that IT has a significant impact on the audit process in small and large companies. Information technology makes effective in verifying transactions by audited companies as it is used to select samples of transactions made by those companies and is also used to control the audit risk related to the company transaction. According to (ARENS et al, 2012) using the Information Communication Package Auditors can select sample transactions about large cash discernment, inventory control, payables, and receivables for further substantive review transactions in financial statement? Therefore, based on literature reference and researchers' assumptions' the following hypothesis developed.

H1: Using IT based audit sampling and audit risk have positive impact on financial statement audit quality at 0.05 level of significance.

3.9.2 Materiality

In the traditional audit approach, the concept of materiality was based on the auditor's experience-based assessments. Currently, due to a wide variety of business transactions, volume, and uncertainty, audit firms have introduced many information technologies packages to aid in materiality decisions. The use of information also enables the auditor to identify the greeting point for the likely information asymmetry between managers and third parties. According to Bahram Meihami et al. (2013) study, information technology has impacted in audit activity such as audit planning, risk assessment and internal control in evaluation. In addition (Alvin, et al 2010) defines that the concepts of materiality and risk in the audit are closely linked and inextricably linked. Risk is a measure of uncertainty, while materiality is a measure of size uncertainty. Taken together, they measure the uncertainty of amounts of a certain magnitude non-audit service. Furthermore, Information technology has been an opportunity to calculate many logical and automatic

operations to overcome inherent materiality errors in financial statements. So, the researcher put forward a hypothesis

H1. Using IT based materiality decision have positive impact on financial statement audit quality at 0.05 Level of significance.

3.9.3 Information Asymmetry

The Knowledge Asymmetry (IA) is a condition in which different parties' own different quantities and forms of information about a project or contract over time (Leuven, 2011). The knowledge of information asymmetry between business insiders and outsiders necessitates external auditing. The key goal of an external financial statement audit is to increase the integrity of the financial figures reported to prospective investors by offering an impartial certification of the details in the financial statements. As a result, a high-quality audit would certainly minimize the knowledge asymmetry between managements and other organization stakeholders. However, after some high-profile scandals, the position of the external auditor has been called into question (Leuven, 2011). In the past few years, Ethiopian private audit firms have imported and designed many computers assist auditing techniques to mitigate the information asymmetry between many parties. Based on researcher empirical analysis the impact of information technology in audit quality has not sufficiently studied in the context of Ethiopia. According to (CAAT, 2018), auditors may use information technology to conduct organizational compliance checks and identify deliberate frauds. Therefore, based on the empirical evidence between the positive relationship information technology and managing information asymmetry the researcher developing the following hypotheses.

H1: IT based information asymmetry assessment have positive impact on financial statement audit quality at 0.05 Level of significance.

3.9.4 Non-audit service

The service of the external auditors has not been limited only to the audit of financial statements, forensic audit and settlement, but they also provide a service other than audit, such as tax position consulting, investment analysis and tax compliance service. The application of information technology packages during the non-audit service has a solution to save efforts that were expected

in the financial statement service. According to (Hong et al, 2017), the conclusions of previous studies are not consistent, and various interpretations have been made. The study (Khasharmeh & Abdelmohsen M. Desoky, 2018) concludes that providing NAS does not affect the independence of the auditor. However, the study conducted by Ejigsew Assaye 2016) concludes that non-audit services do not have an effect on the quality and independence of the audit. generally, the higher revenue that came from it negatively affected the independence of the auditor and the quality of the audit. Therefore, based on literature finding and Citrus Paribas the researcher hypothesized.

H1: Applying information technologies in non-audit activity have a positive effect on financial statement audit quality at 0.05 Level of significance.

Chapter four

Data analysis and presentation

Introduction

The previous chapters focused mainly reviewing literature and to layout suitable studies technique to acquire the goals of the study. In this section the gathered information is provided and the outcomes are mentioned and interpreted accordingly. As indicated in chapter three of this study the researcher distributed 40 questionnaires to Ten audit firms. Out of it from all questionnaires are responded and answered by respondent. This means more than 99% of the questionnaires are answered and only 1 % returned to the researcher.

This chapter is depicted the summary result of Demographic Characteristics of Respondents, Statistical Result of Reliability testing, Test of Classical regression model Assumption, Statistical Test Result of Hypothesis Testing and Discussion of ordered Regression results presented sequentially.

4.1 Demographic characteristics of respondent

In the preceding section, the researcher used criteria such as age, education, membership in a ship association, experience and IT adopted years to differentiate between respondents. Therefore, as can be seen from table 4.1 out of all 75% of respondent are male and the remaining 25% are female. The recent data of AABE justified that out of all acca auditor's only 7% are female. Therefore, the gender status data has not been surprising. On the other hand, from out of all population 55 %-degree holders the remaining 45% MSc and MA holders. Dramatically, there is no PHD and diploma holders among respondents. Again, from the total population 50% of respondent are ACCA holders, only 10 % are CPA holders, 24% of respondent is both ACCA and CPA holders. On the same table 4.1 section three depicted that almost 50% of respondent are experienced between 5 to 10 years, 13 % of respondent are less than 2 years of experienced and 37% of respondent are between 2-5 years of experienced. so, majority of respondent are greater than 5 years' experience because to be a license of audit firms' auditors must require at least more than 5 years' experience level financial industry. On section four table 4.1 depicted that 50 % of audit firms are installing various audit-based software and various IT instruments less than 5

years.but,40% of responded less than 2 years. However, only 10% the population said that we started installing during in the last decade. This implies that unlike other country audit firms Ethiopian audit firms has not long story in IT based audit system. Again, on table 4.1 30 % the work duty of respondent separated that 25% are audit firm managers, 25% senior audit managers, audit manager and principal partner 20 % and 30% respectively.

Table 4.1 Demographic characteristics of respondent

Category	Item	Frequency	Percent
Gender	Male	30	75%
	female	10	25%
	Total	40	100%
Qualification	Diploma		
	Degree	22	55%
	Masters	18	45%
	PhD		
	Total	40	100%
Experience	>2 years	5	13%
	2-5 years	15	37%
	5-10 years	20	50%
	> 10		
	Total	40	100%
Years of IT devices installing	>2 years	20	50%
	2-5 years	18	45%
	5-10 years	2	5%
	>10		
	Total	40	100%
Position	Senior auditor	10	25%
	Senior audit manager	10	25%
	Audit manager	8	20%
	principal partner	12	30%
	Total	40	100%
Membership of Associations	ACCA	15	37%
	CPA	5	37%
	Both	12	12%
	None	6	16%
	Total	40	100%

Survey data 2021, using excel v-2013

In summary, the characteristics of all demographic result reasonable to draw a conclusion about how IT based auditing impact the financial statement audit quality.

4.1.2. Qualitative data analysis

The aim of qualitative data analysis is to draw meaningful conclusions from the often-overwhelming amount of data collected. Also, data in the form of words is referred to as qualitative data (Sekaran & Roger Bougie, 2016,). In this study, cloth ended interview have applied to collect data from five audit managers and five senior audit managers in existing grade “A” audit firms Ethiopia. The interviewees are both well-versed in how information technology has impacted financial statement audit quality. On analysis section, Question one and two is dealing about audit sampling, two and three is about audit risk, four and five is about materiality decision, question seven and eight is about information asymmetry and question nine and ten is about Non depicted in table (4.1.1). Furthermore, the following data used as input for extended open-ended questions about how IT affected financial statement quality, based on information given by grade "A" elite’s firm managers.

Table 4.1.1 Qualitative Data

Q1. Can Today's information technology allow for more accurate audit sampling instead of relying on manual labour.
Q2. Even If not all of records are kept electronically, can use IT based -assisted auditing to audit sampling?
Q3. Some types of audit risk are reduced as a result of technological advancements, while others are introduced and how to handled?
Q4. Technological advances can manage audit risk problems when auditors are confronted with complex and high-volume data?
Q5. The auditor's ability to make materiality decisions can be enhancing using a variety of audit-based information technology tools?
Q6. Froud is more likely to occur during internal control analysis, if audit-based information technology techniques are used?
Q7. Doth Using information technology, auditors can identify significant information asymmetry between managers and stockholders outside the business?
Q8. Is it possible to detect information asymmetry using information technology instead of manual operation?
Q9. Is it true that digital non-audit services, such as consultancy and other operations, allow auditor’s efficiency and effectiveness?
Q10. Does information technology help to mitigate the negative impact of non-audit services on audit quality?

Source: (ARENS, RANDAL J. ELDER, & MARK S. BEASLEY, 2012) (CAAT, 2018) and modified by Researcher.

In general, all interviewed parties use information technology to perform more reliable audit sampling rather than relying on manual labor. When it comes to filling out IT applications for audit. stamping, each of them has a completely different approach. Manual sampling is used by some audit firms in addition to IT-based sampling. Also, almost everyone agrees that auditors should use IT-based audit sampling with manual by creating synergy.

On table 4.1.1 In regards to questions two and three, the researcher is interested in learning to what extent an IT-based sample can impact the consistency of financial statements. As a result, the vast majority of respondents agreed that risk-based audit risk assessment reduces audit risk error. However, as opposed to manual risk assessment operations, few respondents believe there is no fiber IT related audit sample. Regardless, every respondent claim that auditors have always had to deal with IT-related audit risk.

On table 4.1.1, the researcher posed questions five and six to the respondent in order to gain a better understanding of how IT-based materiality decisions in audit quality are made. Based on the data, majority of respondents believe that IT-based materiality determination is the most important advantage for auditors by review tables, IFRS standards, defects, and internal control evaluation for further sampling and analytical procedures. However, only a small number of respondents want to neutralize the above issue. In response to the second query, the respondent stated that IT-based fraud detection has a significant advantage over manual operations.

The researcher forwarded questions seven and ten on table 4.1 about how an IT-based audit would detect information asymmetry. Based on the data, majority of respondents believe that IT-based recognition information has a limited benefit in detecting information asymmetry. Above the issue, the remaining respondent left a neutral answer. In response to the second issue, the majority of respondents believe that manual auditing in the detection of knowledge asymmetry is more beneficial than I-based auditing.

Question nine and ten in Table 4.1.1 discuss how IT-based non-audit services affect audit efficiency. Based on the data, majority of respondents believe that an IT-based advisory service is important for auditors because it reduces the number of employees, saves time, and reduces the

cost of auditing financial statements. Almost every respondent said that it-based advisory raises auditor awareness across client industries, but there are still a few negative effects on efficiency.

4.2 Reliability test (Cronbach alpha test)

Many times, before testing the regression analysis made the reliability and consistency of respondent data must be test. According to (Taherdoost, 2016)the degree to which a measurement of a phenomenon produces a stable and consistent result is referred to as reliability. Also, usually it is also concerned as test of replicability of the data. In social science the most dominant tools of internal consistency measure are the Cronbach Alpha coefficient. In the past few decades there is no agreed rules for internal consistencies. But, usually in social science If the Cronbach's Alpha is greater than 0.7, a construct or variable is considered accurate (Hamed Taherdoost,2016).

Table 4.2 Reliability Test (Cronbach's Alpha)

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
0.731	0.741	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Audit sample	8.3896	1.214	0.551	0.599	0.761
Audit risk	7.9946	1.496	0.365	0.388	0.728
Materiality	8.0321	1.202	0.801	0.712	0.677
Inf -asymmetry	7.7008	1.518	0.22	0.283	0.79
Non-adult	7.8613	1.185	0.62	0.729	0.631

Source: Survey data 2017, using SPSS v-26

As can be seen from table 4.2 the result of Cronbach alpha is 0.731 beyond the minimum internal consistency coefficient of 0.70. Moreover, statistical software of Cronbach's Alpha if item deleted depicted that the value of non-audit variable and materiality is showed less than the minimum criteria Cronbach coefficient but not far from the expected value. Therefore, it is tolerable.

4.3. Statistical Result Test of Classical linear regression model

4.3.1 Normality test

Due to small access of data the sample data of this project is less than 100 population due to few technological audit firms in Ethiopia .so the researcher realized that normality test is have small statistical power (probability of detecting non-normal data) unless the sample sizes are at least over 100. In this study, Shapiro-Wilk, and Kolmogorov test has applied to test the hypothesis. Shapiro-Wilk test is a popular normality test the ratio of two normal distribution variance estimates based on a random sample of n observations. The numerator consists of proportional to the square of the best linear standard deviation estimator the sum of the denominators is the numerator. the squares of the observations with respect to the sample mean. The outcome of the test the square of the Pearson correlation coefficient between ordered observations and a set of weights used to measure the numerator can be written as W . It is a rough estimate of the straightness of the usual quantile-quantile plot since these weights are asymptotically proportional to the corresponding predicted normal order statistics. As a result, the closer W is to the centre of the circle, the better. Kolmogorov test is assuming maximum difference between the observed and predicted cumulative-normal distributions is used in this normality test (software, 2018).

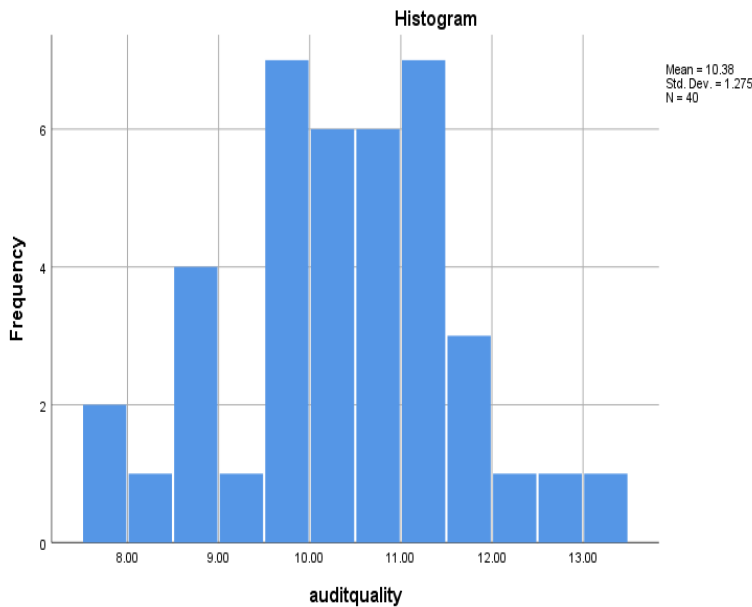
The histogram is a classic way of showing the shape of a set of data. It's made up of a frequency distribution with the number of bins and bin width determined by the user. These decisions can have a significant impact on the histogram's form. A bell-shaped distribution is the best form to look for in the case of normality (software, 2018).

When testing for normality:

H_0 : Probabilities > 0.05 indicate that the data are normal.

H_1 ; Probabilities < 0.05 indicate that the data are NOT normal

Table 4.3. Normality distribution of histogram curve



Serious	Residual
Sample	40
observation	40
Mean	10.377
Median	10.45
Maximum	13.03
Minimum	7.68
Std, dev	1.2
Skewness	0.18
kurtosis	2.58
Shapiro	
Will(W)	0.778
Kolmogorov	2

Survey data 2021 SPSS version 26 output

As can be seen from the table 4.3. the result of the kurtosis is depicted near at (2.58) which is nearest to the standard coefficient of 3 and skewness is showed at 0.18 and skewness is (0.18). The shipiro (w) test showed at (0.775) at 0.05 significance level. Therefore, the researcher fails to reject the null hypothesizes because (w) test greater than 5 % significance level. Based on the data we can conclude that the data are normally distributed for further analysis of regression output.

4.3.2 Odd ratio assumption Test

The key assumption in ordinal regression is that the effects of any explanatory variables are consistent or proportional across the different thresholds, hence this is usually termed the assumption of proportional odds proportional odds (SPSS calls this the assumption of parallel lines but it's the same thing). In ordinal regression there will be separate intercept terms at each threshold, but a single odd ratio (OR) for the effect of each explanatory variable.

As can be seen the table 4.4 the result of odd ratio assumption is (0.01) beyond the minimum coefficient standard (0.05). As a result, to test each tentative hypothesis between the dependent and independent variables, the assumption of odd ratio is accepted in this study.

Table 4.4 test of parallel line

Test of Parallel Lines^a				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	.000			
General	.000 ^b	.000	70	1.000

4.3.3. Autocorrelation's test

The Durbin-Watson (D-W) test is one of a popular method used to determine whether or not the disturbance concept lacks first-order autocorrelation. According to (Wooldridge, 2013) When residuals and their own past values have a serial association, autocorrelation error occurs. In this study (D_W) test is applied to test whether the constant term is correlated in independent variables. Therefore, if the value lies between <2 we conclude that there is positive autocorrelation, if the value is > 2 there is negative autocorrelation is occurred and if the value of d is lies exact at 2 point there is zero autocorrelation in the model ((Shalabh, 2018).

Table 4.5Auto correlation test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1	1	0	2.286
Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	7.6833	13.0333	10.3775	1.27513	40
Residual	0	0	0	0	40
Std. Predicted Value	-2.113	2.083	0	1	40

Source: Survey data 2021, using SPSS v-26

As the data depicted from table 4.4. the (D-W) test showed that 2.2 which is nearest the minimum standard of 2. Therefore, there is no significant autocorrelation problem detected in this model.

4.3.4 Multicollinearity test

One of the assumptions of liner regression analysis is each independent variable are not strongly correlated with each other but highly correlated with dependent variable. According to (Shrestha, 2020) Multicollinearity is happened when the regression model used several independent that are significantly correlated not only with the consequences but also to each other

Table 4.6 Multicollinearity test

Multicollinearity test				
Model		Beta In	Collinearity Statistics	
			VIF	Minimum Tolerance
1	Audit sample	.334 ^b	1.342	0.745
	Auditrisk	.263 ^b	1.369	0.73
	Infor-Assimatr	.235 ^b	1.247	0.802
	Nonaudit	.147 ^b	1.794	0.557
2	Auditrisk	.253 ^c	1.371	0.592
	Inforassimatr	.340 ^c	1.334	0.559
	Nonaudit	-.174 ^c	3.07	0.326
3	Auditrisk	.290 ^d	1.384	0.45
	Nonaudit	-.108 ^d	3.125	0.32
4	Nonaudit	.074 ^e	3.689	0.271
a. Dependent Variable: auditquality				
b. Predictors in the Model: (Constant), materiality				
c. Predictors in the Model: (Constant), materiality, auditsample				
d. Predictors in the Model: (Constant), materiality, auditsample, inforassimatr				
e. Predictors in the Model: (Constant), materiality, auditsample, inforassimatr, Auditrisk				

Source: Survey data 2021, using SPSS v-26

According to (Nebiye, 2017) If the correlation coefficient VIF more than (10) the model is said to have a significant non-tolerable multicollinearity problem. Therefore, based on the data table 4.6 the result all independent variables VIF is less than the tolerance value (10). Therefore, our analysis found that there is no evidence of a multicollinearity problem in this study.

4.4. Statistical Test Result of model summary

The statistical result of the ordinal regression model Least Squares Method adopted in this study is described below in table 4.6. usually, the percentage of variance in the dependent variable explained by variation in the independent variables is represented by R2. Also, the most significant advantage of R2 in empirical studies is that it can be used as a fast and easy-to-understand measure of the calculated model's goodness of fit (Britto, 2011). According to (Chuda Prasad Dhakal, 2018) Small R-squared values aren't always a bad thing, and high R-squared values aren't always a positive thing. Simply, it tells us how much our independent variables are explained dependent variable. Therefore, table 4.7 shows that the result of (R-squares is 0.99%). In other word, it based audit sampling, audit risk, audit materiality, information asymmetry and non-audit service are explained (0.99%) the variance of audit quality. However, the remaining 1 % are not explained by existing independent variables.

Table 4.7 Model processing summary and R -squared
Case Processing Summary

		N	Marginal Percentage
Auditquality	Strongly-agree	8	20.0%
	Agree	8	20.0%
	Neutral	8	20.0%
	Disagree	8	20.0%
	Strongly agree	8	20.0%
Valid		40	100.0%
Missing		0	
Total		40	

Pseudo R-Square

Cox and Snell	.996
Nagelkerke	1.000
McFadden	1.000

Source: Survey data 2021, using SPSS v-26

According to (ordinal regression re store, 2021) model fitting information describe weather the model enhances our ability to predict the outcome before we begin looking at the effect of each explanatory variable in the model. also, he explained the important chi-square statistic (P.<0005) shows that the final model outperforms the baseline intercept -only model significant. Therefore, based on table 4.8 model fitting information result depicted less than (>0.001) which indicates that the model makes more accurate prediction. also, on table 4.6 the case possessing summary statistic tells that there is no missing data on data entry.

Table 4.8 Model fitting information

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	219.517			
Final	.000	219.517	5	.000

Source: Survey data 2021, using SPSS v-26

4.5 Testing the impacts of IT in financial statement audit quality

The results of the audit quality model are discussed in depth in this section and the hypotheses tested in this analysis are about the relationship between audit quality as a dependent variable. whereas, it based audit sampling (H1), audit risk(H2), materiality(H3), information asymmetry(H4), and non-audit activity (H5), are considered as independent variable. The result of ordinal regression output is following.

$$\text{Log}(p/1-p) = a + 8.402(IT) + 8.742(IT) + 8.898(IT) + 6.531(IT) + 1.952(IT) + e,,,,,$$

P =probability of outcome financial statement quality

The result of the above equation states that probability impact of financial audit quality if external auditors used IT based audit sampling, audit risk, materiality, information asymmetry and Non audit activity.

Hypothesis One: The impact of IT based in audit sampling in financial statement audit Quality?

Previous research in this area has primarily focused on the use of traditional sampling methods, particularly variable sampling, whether in manual or automated systems Making use of computerized systems. Sample selection can be done in a variety of ways including Random number generators were used to apply random selection, sampling of monetary units, the auditor selects the sample in a haphazard manner, rather than using a formal process. Non-statistical and statistical sampling methods can also be used in audit sampling. However, if a computerized random number generator or random number tables are used to calculate the sample, it is more likely to be completely random (ISA, 2009).

In this study the first hypothesis that "using IT based audit sampling has a positive impact on audit sampling in external financial statement audit quality in Ethiopia ". If the p-value of audit sampling is less than 0.05 and the coefficient of audit sampling is positive, it is appropriate (Wooldridge, 2013). Table 4.8 shows the p-value and coefficient of IT based audit sampling as less than (>0.0001) and 8.402 respectively. Based on the result, at the 5% and 1% significance levels, the hypothesis that there is a substantial positive relationship between sampling and audit quality is acknowledged. The findings show that using various IT packages during audit sampling is critical for improving Ethiopia's current audit quality. Furthermore, the finding of the study in line previous researcher's (Anas, Ali Al, & dr,ahmed, 2013) and (Mohammed Alsharairi, 2019).

Hypothesis Two: The impact of IT based in audit risk in financial statement audit Quality?

Since auditors cannot and should not attempt to review all transactions, audit risk is essential to the audit process. Having in mind that the audit risk is the risk that the auditor may express inadequate audit opinion when the financial statements are materially inaccurate, the concept of audit risk is very complex concept in the overall audit process (Nikolovski, et al, 2016). Recently, due to Ethiopia's fast-paced economy, a large number of transactions and knowledge have been overwhelmed in recent decades. Due to this, Ethiopian private audit firms are shifting to IT-based auditing rather than manual auditing in order to mitigate these occurrences. Computers have an effect on every aspect of the economy. In this study, the second hypothesis is that financial statement audit quality and It-based audit sampling have a significant positive relationship.

As a result, if the p-value of audit risks less than 0.05 and the audit risk coefficient is positive, the hypothesis that there is a strong positive association between experience and audit quality will be acknowledged (Wooldridge, 2013). As shown in table 4.8, the p-value and coefficient of experience are less than (>0.0001) and 8.742, respectively. Based on the result, at a 5% significance level, the hypothesis that there is a substantial positive relationship between audit quality and IT based sampling is acknowledged. The findings show that using IT-based audit sampling is critical for improving Ethiopia's current state of external financial audit quality. In addition, the finding of the study consistent result with previous researcher's (Shipeng Han, 2013) (Karlsen & Maria Wallberg, 2017) and (Vanbutsele, 2018).

Hypothesis Three: The impact of IT based materiality decision in financial statement audit Quality?

Materiality decisions are taken based on auditor expertise, tenure, and audit fee in the Ethiopian external audit firm's history. However, Ethiopian audit firms have recently realized that based on previous trend's, it is difficult to reduce information overload and excessive transaction. They are establishing their own It-based audit service, which includes materiality decisions, in order to solve the aforementioned issue. According to (CAAT, 2018) Auditors must use CAAT to improve the audit process' quality and efficacy, as well as to detect materiality. Auditor should determine a materiality requirement for the financial statements as a whole when assessing the overall audit plan. To decide what is important to the users, professional judgment is needed. The auditor will normally apply a percentage to a chosen benchmark when determining materiality for the financial statements as a whole (SAS, 2006).

The study's hypothesis is that IT-based materiality decision and financial statement audit have a significant positive relationship. If the IT based materiality p-value is less than 0.05 and the coefficient is positive, it would be accepted. Table 4.8 shows that the p-value and coefficient are less than (0.0001) and (8.898), respectively. Based on the result, at a 5% significance level, the hypothesis of a substantial positive relationship between IT based materiality and financial statement audit quality is accepted. This finding confirms that using an IT-based materiality decision improves the current state of financial statement audit quality. Also, the finding of the study is in line with previous researcher's (Adi Masli) and (Anas, Ali Al, & dr,ahmed, 2013).

Hypothesis Four: The impact of IT based information asymmetry assessment in financial statement audit Quality?

One of the most widely accepted leading reliable theories states that one of the primary goals of external auditing financial statements is to recognize knowledge asymmetry among stockholders (ITTONEN, 2010) Ethiopian audit firms have historically done their work manually, as evidenced by the country's past auditing pattern. In contrast to western countries, Ethiopia has yet to experience scandals such as those involving the Lemon Brothers and other failed financial institutions, due to information asymmetry. In recent years, some of Ethiopia's most experienced major audit firms have recognized that incorporating information technology into the auditing process allows auditors to balance information between managers and outside stockholders. (HST, 2018).

Therefore, the study's fourth hypothesis is that there is a substantial positive relationship between It-based information asymmetry and financial statement audit quality. If the independent variable p-value is less than 0.05 and coefficient is positive, it will be accepted. Table 4.8 shows that the p-value and information asymmetry coefficient are (<0.0001) and (60531), respectively. Based on the data, at a 5% level of importance, the hypothesis of a significant positive relationship between IT based information asymmetry decision and financial statement audit quality is accepted. The findings show that using information technology to identify information asymmetry between internal and external stockholders is critical for improving the current state of external financial statement audit in Ethiopia. Also, the finding of the study is consistent with previous researchers (Yiyang Fan, 2012) and (AnnaCarin & Maria, 2017).

Hypothesis Five: The impact of IT based non-audit service in financial statement audit Quality?

Many business stockholders have recently been chastised because auditors have compromised audit quality as a result of other consultancy, coordinating, and tax preparation services provided by Ethiopia audit firms. Previous research hasn't consistently shown how an independent auditor's simultaneous provision of audit and non-audit services to a client organization affects audit efficiency (Park, et al, 2017). According to the majority of the external auditors who responded, the findings indicated that providing NAS does not have a detrimental impact on auditor independence and audit efficiency if a firm and client implement proper safeguarding procedures such as undertakings audit and NAS Separate engagement teams, departments, audit partner rotation, and peer (inter-firm) analysis (Assaye, 2016).

Therefore, the study's fifth hypothesis is that there is a substantial positive relationship between IT-based non-audit services and audit quality, If the p-value is less than 0.05 and the coefficient is positive, it will be accepted. Table 4.8 shows that the p-value and coefficient of non-audit service are (0.196) and 1.952, respectively. Based on the data, at a 5% even 10% significance level, the hypothesis of positive relationship between IT based Non audit service and audit quality is statistically rejected. This result shows that relying on an IT-based non-audit service to ensure financial statement audit quality has a low probability of success. Also, the finding of the study consistent result with previous researcher's (joshi, 2007) and (Raudeliunjene, 2021).

Table 4.9 Ordinal Regression result

Parameter Estimates								
			<i>Std. Error</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>	<i>95% Confidence Interval</i>	
		<i>Estimate</i>					<i>Lower Bound</i>	<i>Upper Bound</i>
	<i>[Auditquality = 9.53]</i>	79.803	13.286	36.079	1	0.000	53.763	105.843
<i>Location</i>	<i>Auditsample</i>	8.402	1.805	21.675	1	0.000	4.865	11.939
	<i>Auditrisk</i>	8.742	1.883	21.543	1	0.000	5.050	12.433
	<i>materiality</i>	8.898	2.356	14.269	1	0.000	4.281	13.515
	<i>inf-Assimetry</i>	6.531	1.765	13.692	1	0.000	3.071	9.990
	<i>Non-audit</i>	1.952	1.510	1.670	1	0.196	-1.008	4.912
<i>Link function: Logit.</i>								

Source: from SPSS version 26 computational output

5.1 Summary of findings

On this study, the researcher proposes five hypotheses. Out of all Four hypotheses are accepted, while only one is refused. In the preceding portion, the findings on each hypothesis were detailed.

The following are the thesis's key findings:

- IT based Audit sampling has positive and significant impact on financial statement audit quality
- IT based Audit risk selection has positive and significant impact on financial statement audit quality
- IT based Audit materiality decision has positive and significant impact on financial statement audit quality
- IT based Auditor information asymmetry identification has positive and significant impact on financial statement audit quality
- IT based non audit service has positive but insignificant impact on audit quality financial statement.

Chapter Five

Conclusion and Recommendation

This chapter is the study's final section, and it contains conclusions and suggestions based on the study's results. As a result, the chapter is divided into three sections. The introduction is in section 5.1, the conclusion is in section 5.2, and the recommendation. finally, the viewpoint of researcher further research area about audit efficiency is raised in section 5.3.

5.1 Conclusion

The study's aim is to understand how the current state of financial statement audit quality has changed as a result of dynamic shifts in information overload, transaction sophistication, and large sums of money invested. According to many empirical reports, after many financial institution scandals, clients, administrators, and auditors have become more aware of audit quality. Furthermore, several studies have been conducted in foreign countries, especially in western countries since last decade. However, the Ethiopian context, only a few studies on audit quality have been performed.

In light of the above, the main objective of this study was to examine “The impact of information technology in the financial statement audit quality in Ethiopian grade “A” external audit firms”. The research correlated financial statement audit quality using a very basic fundamentals concept of IT-based audit sampling, audit risk evaluation, materiality judgment, information asymmetry, and non-audit operation. The research used a mixed approach to maximize knowledge in order to achieve the expected goal. The qualitative data is collected using a closed-ended questioner, and the quantitative data is collected using an open-ended questioner. The data comes from closed-ended questioners that have been statistically analysed with SPSS. However, the results of the interviews have been analysed in words (qualitative manner).

The retrieved and collected first subjected to a reliability test using Cronbach's Alpha, which yielded a score of 0.73, which is significantly higher than the minimum threshold of 0.60. The adjusted value of R square (0.996) indicated that IT based audit sampling, audit risk, audit materiality, information asymmetry and non-audit service are explained (0.99%) the variance of

financial statement audit quality. As a result, the defined and evaluated independent variables are likely to be significant determinants of financial statement audit efficiency in Ethiopian external audit. In addition, an ordinal regression model used to examine the effect of independent variables on the likelihood of financial statement audit quality. Also, the model fitting information result is less than (0.0001), indicating that the model substantially matches the data.

According to the findings of ordinal regression study,

- Using IT based Audit sampling has a positive probability impact on financial statement audit quality in Ethiopia. Furthermore, Qualitative findings revealed that IT-based audit sampling is more reliable than manual sampling and reduces sampling error during the auditing period.
- Using IT based audit risk assessment has a positive probability impact on financial statement audit quality in Ethiopia's. Furthermore, Qualitative findings revealed that when compared to manual audit risk, IT-based risk-based evaluation creates a more desirable environment. Furthermore, it lowers the likelihood of auditors finding mistakes.
- Using IT based materiality decision is positive probability impact on financial statement audit quality in Ethiopia audit firms. Also, Qualitative findings revealed that IT-based materiality determination gives the most important advantage for auditors by review tables, IFRS standards, defects, and internal control evaluation for further sampling and analytical procedures.
- Using IT based information asymmetry is a positive probability impact on financial statement audit quality. Also, Qualitative findings revealed that in Ethiopian audit firms, manual based identification auditing is more useful in identifying knowledge asymmetry than IT based auditing.
- Using IT based Non audit activity is positively probability associated with financial statement audit quality but statistically in significance. However, Qualitative findings revealed that Auditors benefit from IT-based consulting services because it decreases the number of staff, saves time, and lowers the expense for auditing of financial statements audit quality.

5.2 Recommendation

The researcher recommended the following viewpoints based on the study's main findings:

- ❖ The findings show that the variables of IT-based audit sampling, audit risk, materiality judgment, information asymmetry identification, and non-audit service are all important influences on the quality of Ethiopian external audit financial statements. As a result, Ethiopian external audit firms should create an IT advisory department with current staff teams to mitigate the risk of cyber and software failure when doing the aforesaid operation.
- ❖ Ethiopian private audit firms should promote various audit-based service quality model to enhance the current state of financial statement audit quality. Example big four service quality model, technological based service quality model.
- ❖ The Ethiopian Accounting and Audit Board (AABE) should prepare training facility for external auditors in other countries as well as in Ethiopia to update their IT-based audit processes skill.
- ❖ Ethiopian audit firms should be encouraged to use IT-based consultation. Furthermore, a distinction between the audit and consulting teams should be developed to improve the quality of financial statement audits.

5.3 Further Research recommendation

The researcher discovered the following two research directions for additional study during the research process.

- “Challenge and opportunity implementation of IT based digital audit process”: In case of grade ‘B’ and ‘C’ Ethiopian private audit firms.
- “Challenge and opportunity conducting IT based full sampling auditing method”: In case of grade “A” private audit firms in Ethiopia.

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Appendix

A. Ordered regression output

Notes

Output Created		07-MAY-2021 17:14:13
Comments		
Input	Data	G:\mikispss.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	41
	Missing Value Handling	
		User-defined missing values are treated as missing.
		Cases Used
		Statistics are based on all cases with valid data for all variables in the model.
Syntax		PLUM auditquality WITH auditsample Auditrisk materiality inforassimetry Nonaudit /CRITERIA=CIN(95) DELTA(0) LCONVERGE(0) MXITER(100) MXSTEP(5) PCONVERGE(1.0E-6) SINGULAR(1.0E-8) /LINK=LOGIT /PRINT=FIT PARAMETER SUMMARY TPARALLEL.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.03

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	219.517			
Final	.000	219.517	5	.000

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	56.529	235	1.000
Deviance	66.118	235	1.000

Link function: Logit.

Pseudo R-Square

Cox and Snell	.996
Nagelkerke	1.000
McFadden	1.000

Link function: Logit.

Test of Parallel Lines^a

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	.000			
General	.000 ^b	.000	70	1.000

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[auditquality = 5.07]	52.404	9.834	28.394	1	.000
	[auditquality = 6.77]	56.830	10.090	31.720	1	.000
	[auditquality = 7.25]	59.231	10.534	31.617	1	.000
	[auditquality = 7.52]	61.300	10.813	32.136	1	.000
	[auditquality = 7.77]	62.847	10.978	32.770	1	.000
	[auditquality = 7.93]	65.403	11.269	33.684	1	.000
	[auditquality = 7.98]	67.334	11.557	33.944	1	.000
	[auditquality = 8.37]	68.729	11.810	33.865	1	.000
	[auditquality = 8.53]	70.054	12.031	33.905	1	.000
	[auditquality = 8.63]	71.292	12.237	33.942	1	.000
	[auditquality = 8.95]	73.277	12.623	33.700	1	.000
	[auditquality = 9.25]	75.213	12.929	33.844	1	.000
	[auditquality = 9.28]	76.316	13.026	34.324	1	.000
	[auditquality = 9.37]	77.932	13.160	35.071	1	.000
	[auditquality = 9.53]	79.803	13.286	36.079	1	.000
Location	auditsample	8.402	1.805	21.675	1	.000
	Auditrisk	8.742	1.883	21.543	1	.000
	materiality	8.898	2.356	14.269	1	.000
	inforassimetry	6.531	1.765	13.692	1	.000
	Nonaudit	1.952	1.510	1.670	1	.196

EPAAA	ASE	EEAA	All EPAAA, ASE & EAA	EPAAA & ASE	EPAAA & EAA	ASE & EAA	NONE

3. Your Membership of international professional association.

(Please put your tick marks in highest of your international qualification mentioned below).

ACCA	CPA	Both ACCA & CPA	None

4. Your qualification

(Please put your tick marks in highest of your education qualification mentioned below).

Diploma	Bachelor's Degree	Master's Degree	PhD

5. Your current position

(Please put your tick marks in the appropriate box provided)

Senior Auditor	Deputy Audit Manager	Audit Manager	Senior Audit Manager	Principal/ Partner

6. Years of Experience in External Audit

(Please put your tick marks in the appropriate box provided)

Less than 2 years	2 to 5 years	5 to 10 years More	than 10 years

7.years of adopting information technology devices.

Less than 10 years	Less than 5 years	Less than 2 years	None

8. your current audit firms grade status

Grade A	Grade B	Grade C

Section 2. Factors that impact financial statement audit quality.

II – Audit sampling using information technology.

S/N	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Using information technology can enable auditors to identify high-risk areas where they should focus their investigative efforts.					
2	Information technology enables auditors use risk control mechanisms by simplicity large volume and variety of transactions.					
3	Appling information technology can potentially detect any intentional fraudulent activity and provide likely to focus auditor’s intention.					
4	Using automated devices can simplify Auditor test of control (RISK MODEL) and make some signal for efficient substantive test of transaction.					
5	By Appling information technology auditors can enable efficient by comparing Flowchart VS actual transaction.					

III. -Audit risk decisions based on information technology.

S/N	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The electronic audit programs help the external auditor to minimize inherent audit risk.					
2	Information technology can reduce sampling risk by increasing the number of item selection during sample size.					
3	Various audit software can give some signal when auditor's make non-sampling risk.					
4	The intentional act of managers in abusing hardware, software & accounting information system can lead to bias IT based auditor risk decision.					
5	Effective digital communication between auditor, clients & management helps to reduce information asymmetry					

IV. Information technology-based materiality decision (internal control analysis)

S/N	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The audit programs used by external auditors provide more accurate information on the efficiency of internal controls in the audited companies.					
2	Using various technological tools auditors can manage information overload for sound internal control analysis.					

3	Using information technology help auditor's to analyses test management assertion against pre-determined criteria (IFRS, GAAP).					
4	The risk of intentional act of client managers in abusing hard ware, software & accounting can be detected in IT based materiality decision.					
5	Appling digital based internal control assessment lead a bias audit Materiality decision.					
6	Audit software facilitates compliance with the technical requirements of auditing standards					

V. Information technology & information asymmetry

S/N	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Applying information during audit process can Minimizing information asymmetry between the agents and the principal about existing financial data.					
2	Information technology devices can bring some sort of signal regarding occasions, transaction & events which is known by managers but hidden for stockholders.					
3	Using information technology is not far strong necessarily to evaluate existing potential information asymmetry about Clint financial data.					
4	By using information technology auditors can obtain evidence regarding information asymmetry.					

VI. –Information technology in non -audit activity.

S/N	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Information technology devises have a potential to replace some audit teams assigned in non-audit activity.					
2	Applying information technology devises in non-auditing activity can save auditors effort and time expected for financial statement audit.					
3	Using information technology during non-audit sampling doth not provide efficiency and effectiveness.					
4	Technical and other consultations within the audit firm enhances the quality of judgements and synergy.					
5	It based Technical and other consultations influence the quality of the resulting audit process.					
6	Using information technology in non- audit activity enables efficiency and effectiveness in various consultation and project analyses decision.					

C. Diagnosis test

Case Processing Summary

		N	Marginal Percentage
Audit quality	Strongly-agree	8	20.0%
	Agree	8	20.0%
	Neutral	8	20.0%
	Disagree	8	20.0%
	Strongly agree	8	20.0%
Valid		40	100.0%
Missing		0	
Total		40	

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.731	.741	5

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	1.000	.00000	2.286

a. Predictors: (Constant), nonauditactiv, materiality, infaassimatry, auditrisk, auditsampling

b. Dependent Variable: auditquality

Excluded Variables^a

Model	Beta In	Collinearity Statistics		
		VIF	Minimum Tolerance	
1	auditsample	.334 ^b	1.342	.745
	Auditrisk	.263 ^b	1.369	.730
	inforassimatry	.235 ^b	1.247	.802
	Nonaudit	.147 ^b	1.794	.557
2	Auditrisk	.253 ^c	1.371	.592
	inforassimatry	.340 ^c	1.334	.559
	Nonaudit	-.174 ^c	3.070	.326
3	Auditrisk	.290 ^d	1.384	.450
	Nonaudit	-.108 ^d	3.125	.320
4	Nonaudit	.074 ^e	3.689	.271

a. Dependent Variable: auditquality

b. Predictors in the Model: (Constant), materiality

c. Predictors in the Model: (Constant), materiality, auditsample

d. Predictors in the Model: (Constant), materiality, auditsample, inforassimatry

e. Predictors in the Model: (Constant), materiality, auditsample, inforassimatry, Auditrisk

D. Grade's 'A' Ethiopia private audit firms List

1. Tay and co
2. ASGB partnership
3. A.w Thomas co
4. A.A. bromhead
5. HST
6. TMS plus
7. Kokeb Moges and Melkamu Belete co
8. Delottee co
9. Zemedhun co
10. Getachew kasaye and co