EFFECT OF AUDIT FIRM SIZE INPUT FACTORS, FIRM SIZE PROCESS FACTORS AND INFORMATION TECHNOLOGY ADOPTION ON AUDIT QUALITY IN KENYA

BY

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

Concerns about audit quality and the factors that influence quality have been longstanding subjects of interest in academic, practitioner, and regulatory debates. The objective of enhancing audit quality underlies standard setting activities and doubts about the quality of audit motivate investigations and other actions by regulators. Audit quality protects the economic interests of the owners and other interested parties by enhancing the value of the financial statements prepared by the managers. An auditor is able to identify errors and advice clients on the same to avoid future mistakes. Use of more accurate data for credit and investment analysis, negotiations regarding the workforce, or decisions affecting activities outside the organization improves the performance of the management. An audit covering all the six elements of the International Standard on Quality Control 1 should bring out any material misstatement as a mark of quality. However, lack of quality reporting has been observed in both large and small firms. This study aimed at establishing the effect of firm size factors on audit quality in Kenya. The specific objectives of the study were; to determine the effect of firm size input factors on audit quality, to determine the impact of firm size process factors on audit quality, and to evaluate the effect of information technology adoption on audit quality. Descriptive survey design was used and the population targeted was the 613 Audit Firms registered by the Institute of Certified Public Accountants Kenya [ICPAK] in Nairobi. Simple random sampling technique was used whereby a sample size of 236 audit firms was surveyed. The firms in Nairobi were chosen as they are representative of the other entire towns in Kenya. The study used structured questionnaire as the main data collection tool. The coefficient of determination (Adjusted R^2) shows that the selected variables explain 25.3% of the variation in the audit quality. Pearson's correlation was used to establish the relationship between firm size input, process, and information technology factors and audit quality. Regression analysis determined the effect of the independent variables on audit quality and the model generated from the study is $AQ = 1.593 + .223X_1 + .031X_2 + .359X_3$. The $F_{Table\ (3,691)}$ value of 2.6049 is lower than the $F_{calculated}$ value of 79.356 hence we fail to accept the null hypothesis at $\alpha=0.05$ significance level and state there is significant relationship between the independent variables and audit quality. Findings from this research are of great importance to different stakeholders interested in audit quality. These interest groups include; the audit firms, regulators and corporations which will learn whether firm size input, process, and information technology factors affect audit quality; the regulators who will learn whether audit quality is dependent on firm size input, process, and information technology.

Key Words: Firm Size Audit Input Factors; Firm Size Audit Process Factors; Adoption of Information Technology; Audit Quality

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I thank God for giving me the inspiration to work on this project as without Him this may not possible. My sincere acknowledgement goes to my Supervisor Dr. Martin Mbewa for the technical support his sense of humour made working under his supervision encouraging. To my office staffs who managed the office in my absence I say thank you and may God bless you.

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DEDICATION

This Dissertation is lovingly dedicated to late Tabitha Wairimu Thuo and father Nahashon Thuo Ngure who wanted me well-schooled were it not for the resources. They gave me the drive and discipline to tackle any tasks with enthusiasm and determination. I also dedicate it to my late son Maurice, the surviving three sons Anthony, Edwin, and Humphrey and two daughters Dorothy and Mary who have been my source inspiration from a very early age. Last but not least, it is dedicated to my wife Nancy who shouldered more responsibility during my absence while studying.

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ACRONYMS AND ABBREVIATIONS

AAA	American Accounting Association
APB	Accounting Principles Board
CPA	Certified Public Accountant
FRC	Financial Reporting Council
GAAP	Generally Accepted Accounting Principles
IAASB	International Auditing and Assurance Standards Board
IAESB	International Accounting Education Standards Board
ICAEW	Institute of Chartered Accountants in England and Wales
ICPAK	Institute of Certified Public Accountants of Kenya
IFAC	International Federation of Accountants
IPOs	Initial Public Offers
ISAs	International Standards on Auditing
ISQC	International Standard on Quality Control

OPERATIONAL DEFINITION OF TERMS

Audit Committee: A group of experts overseeing all internal and external audit functions of a company (Financial Reporting Council [FRC], 2008).

Audit Partner: A partner, or person in an equivalent position who is a member of the Independent Auditor's audit engagement team who the has responsibility for decision-making on significant auditing, accounting, and reporting matters that affect outcome (Institute of Chartered Accountants in England and Wales [ICAEW], 2009).

Audit Quality: Expressed in terms of three fundamental aspects: inputs, outputs, and context factors. Inputs include the auditor's personal attributes such as auditor skill and experience, ethical values and mindset and the audit process concerning the soundness of the audit methodology, the effectiveness of the audit tools used, and the availability of adequate technical support, all geared toward supporting execution of a quality audit. Outputs are the auditor communications. Context factors include corporate governance, law and regulation. (IAASB, 2011).

Auditing: A systematic process of objectively obtaining, and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users (American Accounting Association [AAA], 1973).

Auditor: is well trained accountant approved and authorized by the regulating authority who should have the capacity to carry out audit (Revisorslag, 2001); cited in Chia-Ah, E. & Karlsson, J. (2010).

Auditor Independence: the auditor should carry out his engagement without an influence from any source, where he feels his independence will be compromised he should turn down the engagement (Byrne, 2001).

Firm Size: Firm size consists of partners and staff with the necessary competence, integrity, professionalism, experience and independence to comply with the ethical standards. Employees work in a structured setup where there is effective supervision and review of audit exercise as per the requirements of audit standards (International Auditing and Assurance Standards Board [IAASB], 2014).

Firm Size Input Factors: There are many inputs to audit quality, including the: 'The Key Values, Ethical Considerations and Attitudes of individual auditors and the culture prevailing within the audit firm**,** the auditor's personal attributes (including skills; The knowledge and experience and ethical values), of auditors and the time allocated to perform the audit (IAASB, 2014).

Firm Size Process Factors: The independent process variables of audit size characterized by number of Audit Teams; Qualifications of Audit Team; Partners Workload; and Use of Information Technology (IAASB, 2014).

Going Concern: An entity prepares financial statements on a going concern basis when, under the going concern assumption, the entity is viewed as continuing in business for the foreseeable future (Mutchler and Williams, 1990).

Information Technology: The technology involving the development, maintenance, and use of computer systems, software, and networks for the processing and distribution of data (North Dakota Information Technology [NDIT], 2014).

Quasi-rent: Occurs when one makes an investment and pays for it, and then earns income from it without needing to make further investment. In order to be considered quasi-rent, the income must exceed the opportunity cost of the investment (DeAngelo, 1981).

Software: 'Organized information in the form of operating systems, utilities, programs, and applications that enable computers to work (NDIT, 2014).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Audits exist because of a separation between the ownership and the control of companies in the modern economy where shareholders or owners have given resources to managers with the aim of maximizing their wealth. Opportunistic managers have a propensity for not reporting the true state of the performance of the company, which could result in residual loss to the owners (Krishnan, 2003). The auditor becomes important reducing agency costs by ensuring information asymmetry is reduced, and reducing competing interests between the two parties. Audit services are about reducing agency costs through the verification of financial statements by an independent auditor. The verification process involves the accumulation and evaluation of evidence, which is used by the auditors to form their professional opinion or judgment on the financial statements. According to Yuniatri (2011), the result of the process, the audit opinion that is stated in the audit report, enhances the credibility and quality of the financial statements.

Audit quality affects the credibility and reliability of the audit opinion. It protects the economic interests of the owners and other interested parties by enhancing the value of the financial statements prepared by the managers (Moizer, 2005). Concerns about audit quality and the factors that influence quality have been longstanding subjects of interest in academic, practitioner, and regulatory debates. The objective of enhancing audit quality underlies standard setting activities and doubts about the quality of audit motivate investigations and other actions by regulators (Financial Reporting Council [FRC], 2008).

1.1.1 Firm Size Factors

This study considers firm size in terms of input and process as a means to achieve the output. Input is the number and qualification of audit team; the audit is carried out to ensure that the general public's interest is catered for and therefore it is important for auditors to bring into play the ethical requirements by exhibiting objectivity, integrity, professionalism and independence (IAASB, 2014). Partners and staff have the necessary competences, understanding of the entity's business, active risk assessment, appropriate supervision and review of audit exercise. The audit firm is required to apply auditing standards in its work, observe the laws and regulations applicable, and quality control procedures. Each engagement team should make use of audit software provided by the firm to ensure uniformity in the procedures applied. The spirit team work is important in those involved in the audit. The management should make such arrangements that will ensure an effective and efficient audit process (IAASB, 2014).

Audit inputs includes organizational values, ethical considerations and attitudes of auditors, these are influenced by the culture adopted by the audit firm; knowledge, skills, and experience of audit team. The time allocated for an engagement to be performed is also important. The quality attributes relating to the input factors are further grouped into those that relate directly to engagement, firm, and national levels. The intensity of the audit process and quality control procedures impact audit quality (IAASB, 2014).

Outputs of an audit would involve reports and opinion of the auditor which is presented to interested parties, there could also be other outputs which are not formal but arises from the audit process and would only be felt by the insiders. Changes in the financial reporting practices may improve the communication impact for the better. The audit outputs are often determined by

the context in which they are done, that also includes legislative requirements. The nature of the outputs is sometimes influenced by stakeholders (IAASB, 2014).

1.1.2 Audit Quality

Audit quality is achievable through; exhibited appropriate key values, ethical considerations and attitudes, was sufficiently knowledgeable and experienced' and had sufficient time allocated to perform the audit work, applied a rigorous audit process and quality control procedures, provided valuable and timely reports, interacted appropriately with relevant stakeholders' (Yuniarti, 2011).

The International Federation of Accountants [IFAC] guides the accounting profession through issuance of standards both for reporting to ensure consistency and on auditing process as stipulated in International Standard on Quality Control [ISQC1]. The ISQC1 has six elements and audit firms of whatever size are required to establish and maintain a system of quality control that indicates policies and procedures that address each of the elements (IAASB, 2010). The primary objective of financial reporting is to provide high-quality financial reporting information concerning economic entities, primarily financial in nature, useful for economic decision making (IASB, 2008). Standards focus on the influence of variables such as accounting standards, legal system and enforcement environment, firm size input, process, and information technology factors and industry on the quality of the financial report. Financial statements require qualitative and systematic reporting as per the set rules and regulations. Studies have concentrated on auditor size Krishnan (2003) and Zhou and Elder (2001) as a result of DeAngelo's (1991) work.

In the recent past a few cases have been concluded affecting the popularly known as "big" four audit firms. This have left many people with question lingering in mind as to whether the profession is properly defining the term audit firm size and audit quality. Some common and recent cases of audit failures involving the big firms include firms such as KMPG who have been sued by the SEC (Francis & Yu, 2009).

PWC audit of CATERPILLAR - PWC failed to pin point significant and potential risks to investors which included inappropriate related party transactions, illegal antitrust activities, excess debt and liquidity issues and poor oversight by the audit committee and internal audit. PWC failed to undertake additional procedures or extra effort which could include expanding audit scope, qualifying the audit opinion, issuing a "going concern" opinion and possibly reporting to regulatory authorities when management failed to address illegal activities appropriately (Francis & Yu, 2009). In Kenya, such companies include Uchumi Supermarkets Limited, Kenya Cooperative Creameries (KCC), Kenya National taxi Company (Kenatco), Charterhouse Bank, Trade Bank, Euro Bank, Trust Bank, Exchange Bank, Delphis Bank, among others (Kalani and Waweru (2007); Otieno (2008); Zeituni, Tina and Keen (2007).

1.2 Statement of the Problem

There have been numerous scandals and failures of giant companies involving management frauds where auditors from large firms have given unqualified audit reports. Internationally, we have Caterpillar and Tier One (Francis and Yu, 2009). In Kenya, such companies include Uchumi Supermarkets Limited, Kenya Cooperative Creameries (KCC), Kenya National Taxi Company (Kenatco), Charterhouse Bank, Trade Bank, Euro Bank, Trust Bank, Exchange Bank, Delphis Bank, among others (Kalani and Waweru (2007); Otieno (2008);

Zeituni, Tina and Keen (2007). It is not understood why material misstatements are not discovered during audit processes or if discovered why they are not reported. When the firm collapses, many innocent investors such as suppliers and other creditors and, in the case of banks, depositors are left shouldering losses. At this age and time there has been quite some improvement in Information Technology such that even small firms are able to acquire sophisticated tools and outsource needed manpower whenever the need arises. An audit covering all the six elements of the ISQC1 should bring out any material misstatement as a mark of quality. However, lack of quality reporting has been observed in both large and small firms.

Previous researchers have focused on audit firm revenues, number of offices, and professional headcounts and show that these are significantly associated with the audit quality (Francis and Michas 2011; Bae, 2013). However, no study has been done focusing on firm size input and process factors and influence of information technology on audit quality. There is thus a research gap with regard to the effect of audit firm size input, process, and information technology factors on audit quality that the study sought to address. The study sought to determine whether firm size input, process, and adoption of information technology have an effect on audit quality.

1.3Objectives of the Study

The general and specific objectives of the study were as follows:

1.3.1 General objective

The general objective of the study was to analyze the effect of firm size input, process factors and adoption of information technology on audit quality.

1.3.2 Specific objectives

The study was governed by the following specific objectives;

i. To determine the effect of firm size input factors on audit quality in Kenya.

ii. To determine the impact of firm size process factors on audit quality in Kenya.

iii. To evaluate the effect of information technology adoption on audit quality in Kenya.

iv. To determine the relationship between firm size input and process factors and information technology adoption on audit quality in Kenya.

1.4 Research Hypotheses

The study was guided by the following hypotheses;

H1: There is no significant relationship between firm size input factors and audit quality in Kenya.

H2: There is no significant relationship between firm size process factors and audit quality in Kenya.

H3: There is no significant relationship between adoption of information technology by a firm and audit quality in Kenya.

H4: There is no significant relationship between firm size input and process factors and information technology adoption and audit quality in Kenya.

1.5 Justification and Significance of the Study

There have been many management frauds committed in our country in companies audited by the so called ‘big’ firms who never raised the red flag as to what was happening. The research is important as it shows whether firm size input, process, and information technology

factors have a direct influence on audit quality. The findings are of great importance stakeholders interested in audit quality. This includes the following:

1.5.1 Knowledge base

The results will contribute to the knowledge base in the sense that since auditing is a social science, the general readership will find this study important in adding to their existing knowledge on whether firm size input, process, and information technology factors affect audit quality.

1.5.2 Theory and practice

Firms involved in auditing will learn whether firm size input, process, and information technology factors affect audit quality; regulators who will learn whether audit quality is dependent on firm size.

1.5.3 Stakeholders

Corporations will be informed on what factors to consider when making decisions on which firm to recruit as auditors; scholars in audit quality will also add to their knowledge on the relationship between firm size input, process, and information technology factors and audit quality.

1.6 Scope of the Study

The study covered the effect of firm input and process factors and information technology adoption on audit quality in both the small and large firms in Kenya. It was conducted in Nairobi because here all sizes of audit firms are found and they are representative of those in the entire country. Two hundred and thirty six (236) registered firms out of the 613 in

Nairobi were included in the study. This study covered the period 2009 and 2013 when the Audit Quality through ISQC1 has been in application by audit firms.

1.7 Limitations of the Study

This study was faced with a limitation of refusal by some respondents to complete the questionnaires emanating from the fear of being perceived to be "leaking organization's information to outsiders". To overcome this, the researcher informed the respondents that the study was only for academic purposes and that their identity and responses would not be divulged in any way. However, some respondents flatly refused to complete the questionnaires despite this assurance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section analyzes the relevant literature on effect of firm size on audit quality. The section is divided into; Theory of the Study; Background information on firm size input, process, and information technology factors; Audit Quality; ISQC 1 Standards; Studies done on effect of firm size input, process, and information technology factors on audit quality; Literature Gap and Conceptual Framework.

2.2 Theoretical Framework

There are several different theories that may explain the demand for audit services. Some of the cited theories in literature include; policeman theory, lending credibility theory, theory of inspired confidence, deep pocket and agency theory (Reported in Hayes et al. 2005).

The Policeman Theory held that the auditor is expected to search for, discover and prevent fraud. This thinking was applicable during the development of audit profession. With the sophistication in the way things are done audit has evolved to providing reasonable assurance as to the truth and fairness on the assertions contained in the financial statements. There is still pressure being exerted to audit profession to take responsibility on detection of fraud (Reported in Hayes et al. 2005).

Lending credibility theory purports that the main purpose of an audit is to add credence to information presented in the financial statements (Reported in Hayes et al. 2005).

Inspired Confidence Theory tried to explain why there is a demand for audit which is as a result of having several parties whose interests vary and may not be adequately addressed by management and therefore require an independent assurance which audit firms supply (Limperg, 1932).

Deep Pockets Theory is all about how much is at risk in case of litigation, auditors who are likely to lose more will therefore be more careful hence higher quality. Litigation has been found to be a weak sign of quality in various studies, Dye (1993).

The Agency theory (Watts and Zimmerman 1978, 1986), in the absence of the third parties and management in businesses there would be little need for audit suggests. Since the two are necessary in our current economic activities audit has to be present to neutralize the impact management have on the general public and investors (Higson, 2003). According to Wallace (1980, 1987, 2004), an audit improves the financial information utilized by managers when making decisions. An auditor is able to identify errors and advice clients on the same to avoid future mistakes. Use of more accurate data for credit and investment analysis, negotiations regarding the workforce, or decisions affecting activities outside the organization improves the performance of the management. The study adopted the agency theory since it involves the interest of all stakeholders and which is the responsibility of management.

2.3 Empirical Review

This section details the past studies by scholars on the effect of firm size on audit quality.

2.3.1 Audit firm size and audit quality

Cushing and Lobbecke (1986) examined audit materials of 12 large firms in the US and suggested that firms with structured audit approaches have: a systematic approach to auditing characterized by a prescribed, logical sequence of procedures, decisions, and documentation steps. Studies of audit procedures include descriptive studies about audit methods used in practice, studies evaluating methods, decision aids and other tools used in practice and studies which aim to develop or test new techniques (Curtis, 2006). Curtis (2006) identified and classified audit methodologies used in practice as structured, semi-structured, partially structured and unstructured.

2.3.2 Audit input factors

Audit input factors operate at the engagement, firm, and national levels. The main features of the values, ethical considerations and attitudes input factors at the engagement level are the engagement team's recognition that the audit is performed in the wider public interest; complying with ethical requirements; exhibiting objectivity and integrity; independence; professional competence and due care; and professional skepticism (IAASB, 2014).

The main features of values, ethical considerations and attitudes at the firm level are; Governance requirements which may shape the behavior of management which would in turn influence the culture at this level, and to safeguard the firm's independence; giving rise to personal polices that would encourage audit quality; financial considerations that do not impair audit quality; encouragement of partners and staff to get access to new development in the professional and applying high-quality technical approaches; coupled with promotion of a culture of teamwork on difficult issues (IAASB, 2014).

The main features of values, ethical considerations and attitudes at the national level are: promulgation of ethics requirements that make clear both the underlying ethics principles and the specific requirements that apply; action on the part of regulators, national standard setters and professional accountancy organizations to ensure that the ethics principles are understood and the requirements are consistently applied; sharing of information relevant to client acceptance decisions between audit firms (IAASB, 2014).

The main features of knowledge, skills, experience and time at the engagement level are: competent partners and staff; understanding of the entity's business; making reasonable judgments; lack of involvement of the engagement partner in risk assessment and planning processes, and in directing, supervising and reviewing the audit work; sufficient experience for

staff performing detailed on-site work; appropriate direction, supervision and review of work; staff continuity; sufficient time; and accessibility of engagement team to management and those charged with governance (IAASB, 2014).

The main features of knowledge, skills, experience and time at the firm level are: partners and staff should be allocated enough time and availed enough resources to handle difficult areas whenever they arise; engagement teams being structured in such a way as to include all specialties within the organization; the staff should be well motivated; the training budget should cover all needs for both the audit partners and staff in all areas of the profession such that non will be lacking at this level (IAASB, 2014).

At the national level, the main features of knowledge, skills, experience and time are: existence of robust arrangements for licensing audit firms/individual auditors; clearly defined education requirements; arrangements for updating auditors on current issues and for providing training on new accounting, auditing or regulatory requirements; positioning of the auditing profession to attract and retain individuals with appropriate qualities (IAASB, 2014).

2.3.3 Audit process factors

The main features of the audit process and quality control procedures at the engagement level are: ensuring compliance with auditing standards, relevant laws and regulations by audit team, and the audit firm putting in place the necessary quality control procedures; the making use of the correct software by engagement team; effective teamwork with all involved; management to have in place all that is needed for an effective and efficient audit process (IAASB, 2014).

With regard to features of the audit process and quality control procedures at the firm level, these include: internal quality control reviews and external inspections; creative thinking

by members of audit team and independent judgment; well organized supervision and reviews of what have been accomplished; and ensuring proper documentation of work done (IAASB, 2014).

At the national level, the main features of the audit process and quality control procedures include: pronouncement of standards that would result in quality audit; audit reviews which incorporates attributes that bring out quality, in audit firms and on audit engagements; and having in place systems for addressing audit failures and provision of discipline as deemed appropriate (IAASB, 2014).

2.3.4 Effect of information technology on audit quality

James et al. (2001) audit process is currently adopting new ways as technology is being used to enhance the processes, the audit profession attracted software manufacturers who have seen an opportunity to exploit. This in itself has brought quite some change in the way things are being done. The audit clients are becoming paperless which will require new approaches. Paperless audits have become common feature a shift to audit software to match the new development in auditing procedures. Software packages are capable of improving audit results as the systematic and there is no chance of omitting a procedure. This can also give rise to improvement in fraud detection. With the disappearance of audit trail enhanced monitoring will become necessary.

2.3.5 Audit quality

DeAngelo (1981) equates audit quality to market-assessed joint probability an auditor both detects material misstatements and brings it out in his report. This is a perceived audit quality as the market has to participate in assessment of audit quality. Competence and independence of the auditor is important in audit quality. To be an auditor the regulator will have to be satisfied that one is competent while independence may change with price and is affected

by the integrity of the individual auditor and not the firm. A study on major European business failures revealed that the role of auditors is most often questioned and audit firms are most likely to be sued in failures that involve management or employee fraud (Bollen et al., 2005).

Measurements of audit quality: There have been different approaches by scholars in measuring audit quality. These include:

- **Measuring Audit Quality Using Audit Litigation:** Audit quality can only be noticed after the process otherwise it is unobservable during the process. Palmrose (1988) could only measure audit quality using auditors litigation after the audit. Deis and Giroux (1992) could only quality measure audit quality looking at the quality control reviews in the public sector.

- **Measuring Audit Quality Using Financial Statement Compliance:** In measuring audit quality using financial statement various studies looked at how these statements complied with the standards and other reporting requirements. It is argued that that the larger a firm is the less the incentive to behave opportunistically and the higher the perceived quality of the audit. Hogan (1997), Krishnan and Schauer (2000), Deis and Giroux (1992).

- **Measuring Audit Quality Using Audit Fees:** Audit fee has also been used in measuring audit quality. Copley (1991) finds that using audit fees as the audit quality measure has greater power than a Big 8 vs. non-Big 8 dichotomy in explaining variation levels of local government disclosure. Schauer (2001) measures audit quality using client bid-ask spread, which is the difference between the ask price and bid price for a client company's stock. Colbert and Murray (1998) measure audit quality using the results of peer review.

- **Measuring Audit Quality Using Management Forecast Error:** Davidson and Neu (1993) found that management forecast errors are the absolute values of differences between reported earnings and management forecast earnings, where higher forecast errors indicate

higher audit quality and lower forecast errors indicate lower audit quality. Lam and Chang's (1994) study found that audit quality is also measured by earnings forecasts errors in prospectuses of initial public offerings (IPOs) in Singapore. Higher forecast errors should reflect a lower audit quality level as countries they have also to have a common way of reporting so that one looking at the financial statements would only read the same message (Jaruga et al., 2007).

2.3.6 Effect of audit firm size on audit quality

Several studies have investigated the relationship between audit quality and auditor size (e.g., Francis & Yu, 2009; Hay & Davis, 2004). Most of them confirmed that the large size auditors are positively correlated with audit quality such as Colbert & Murray (1995), DeAngelo (1981), and O'Keefe & Westort (1992). On the other hand, some other surveys have mentioned that there is no difference between large audit firms and smalls one in terms of their impact on audit quality, both of them have the potential to reach an acceptable level audit quality (e.g., Bauwhede & Willekens, 2004; Jackson, Moldrich, & Roebuck, 2008; Larn & Chang, 1994). However, it seems that larger audit firms are more qualified and committed to reach a higher audit quality. It can be attributed to their high technical information and professional competencies as well as their attempt to continue higher education of employees and to maintain firm's reputation on issuing an appropriate audit report.

Some factors such as professional competence, auditor's qualification and supporting technical information undoubtedly can be found in large audit firm's system. These can be taken into consideration when assessing the influence of audit firm's size on audit quality to facilitate the detection of the possible errors (Hussein & Hanefah, 2013). Because of the higher degree of specialization of large audit firm's employees, the technological knowledge of audit groups in large firms would be higher than in small auditors. Larger audit firms support higher quality

audits (Francis, 2004). When the firm becomes larger, a higher audit quality will be demanded with the purpose of enhancing the monitoring and bonding activities. Adopting such strategies will be beneficial to the client, despite some inevitable operating costs (Hay & Davis, 2004).

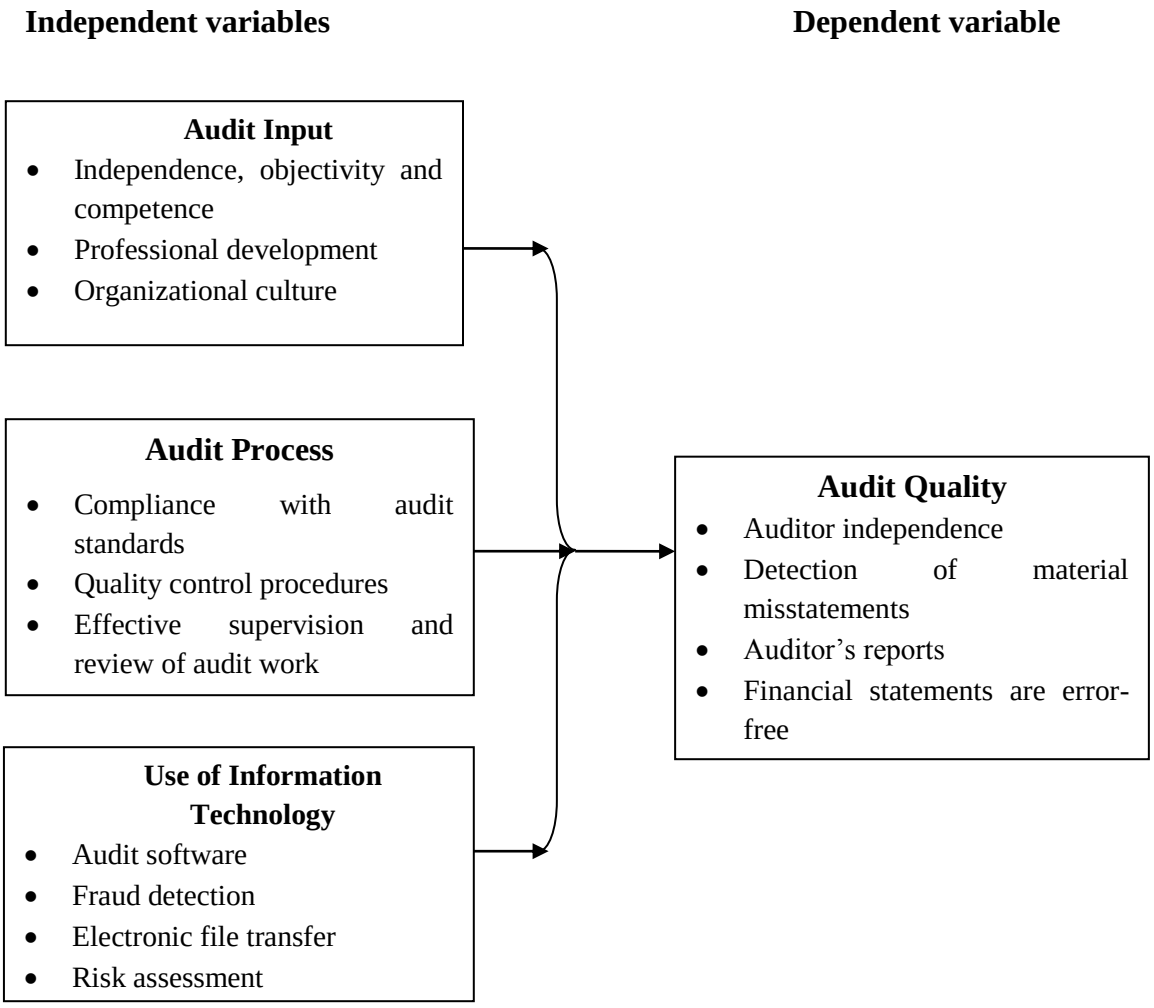
2.4 Knowledge Gap

Based on the literature analyzed and more especially on effect of firm size on audit quality, there is no one single agreement whether large firms carry out qualitative audit. This is based on the evidence that corporations audited by large firms still either go under or are caught up with numerous scandals. Internationally, we have Caterpillar and TierOne (Francis and Yu, 2009). In Kenya, such companies include Uchumi Supermarkets Limited, Kenya Cooperative Creameries (KCC), Kenya National taxi Company (Kenatco), Charterhouse Bank, Trade Bank, Euro Bank, Trust Bank, Exchange Bank, Delphis Bank, among others (Kalani and Waweru (2007); Otieno (2008); Zeituni, Tina and Keen (2007). Previous researches have focused on audit firm revenues, number of offices, and professional headcounts and show that these are significantly associated with the audit quality (Francis and Michas 2011; Bae, 2013). However, no study has been done focusing on firm size input factors, firm size process factors and influence of information technology on audit quality. There is thus a knowledge gap with regard to the effect of firm size input factors, firm size process factors and influence of information technology on audit quality in Kenya.

2.5 The Conceptual Frame Work

FIGURE 1

Conceptual Framework



Source: Researcher's own conceptualization

2.6 Operationalization of Variables

Audit input factors include the values of the auditors which influences whether they will be objective and will demonstrate independence when carrying out an audit. This will impact on the quality of the audit report. When the auditor has a positive attitude and high ethical standards these will also have a positive influence the quality of the audit report. If the firm has had a

culture and experience of providing good audit services that follow the laid down procedures, this will have a positive impact on the quality of audit report produced.

Audit process factors include the number of audit teams that a firm can be able to set up will influence the final report produced as the higher the number, the greater is the number of interactions the teams will have thereby checking the processes being undertaken. Audit team members' qualifications will influence the audit outcome as the more qualified they are, the more thorough they will be in their work. The workload of the partners also influences the quality of the audit report since they will be prone to mistakes and be unable to observe errors committed by their teams in case they are overworked. Use of information technology especially the adoption of specialized auditing software and training of staff on use of the same will on the other hand ensure that the firm is does not leave anything to chance as the software incorporates all the steps necessary in the audit process. This ensures that quality is enhanced. These audit process quality attributes apply at the audit engagement level, at the audit firm level, and at a national level.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details procedures and techniques applied in carrying out the study it covers the research design, target population, sample design used, data collection, instrumentations of data, validity and reliability of research instrument and methods of data analysis adopted in the study.

3.2 Research Design

The research design for this study was a descriptive survey. This was appropriate as it enabled the researcher to collect information from the large target population and thus be able to draw conclusions based on the study objectives.

3.3 Target Population

The population that was targeted for this study was the registered audit firms based in Nairobi within Kenya. The Institute of Certified Public Accountants data has 613 Audit Firms registered in Nairobi (ICPAK Audit Firms Database, 2014). These audit firms are representative of firms operating in the entire country.

3.4 Sampling Technique

The study used the following Krejcie and Morgan (1970) sample size formula as used in a study by James E. Bartlett and Joe W. Kotrlik (2001) to calculate the sample size for this study.

EQUATION ONE

Sample Size Formula

$$s = \frac{(z)^2 (p)(q)}{(d)^2}$$

Where:

S= Sample size

Z= Value of selected alpha level. In this study 0.25 in each tail = 1.96

d= acceptable margin of error for proportion being estimated = 0.05.

(p) (q)= estimate of variance = 0.25 maximum possible proportion (0.5) (1-0.5).

This produces maximum possible sample size.

$$s = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384$$

Cochran's (1977) correction formula was used to calculate the final sample size.

$$s_1 = \frac{S}{1 + \frac{s}{n}}$$

Where S_1 = Required Sample size

S = uncorrected sample

N = Total target population

$$s = \frac{384}{1 + \frac{384}{613}} - = 236$$

3.4.1 Sample size

Given the target population of 613 for the all the audit firms operating in Nairobi, the sample size was 236 as per the Krejcie and Morgan (1970) formula and Cochran's (1977) correction. Simple random sampling was used to pick the firms to be included in the sample.

3.5 Instrumentation and Data Collection

Structured questionnaires were designed and distributed to the respondents guided by the sample allocation. Each question in the questionnaire was simplified for ease of response and structured to enable respondents make choices out of the many multiple choices given based on Likert Scaling. A letter of introduction from KCA University was obtained and given to the respondents before responding to the questions as a proof of the authenticity of the study. The respondents were requested to read and understand the questions thoroughly before filling them. The respondents were given time in which to fill in the questionnaires after which the questionnaires were later collected. Collected data was verified and coded in preparation for analysis and documentation of the findings.

3.6 Validity and Reliability

Mugenda and Mugenda (2003) define validity as the accuracy and meaningfulness of inferences which are based on research findings. An instrument can be validated by proving that its items or questions are representative of the skills or characteristic that it is intended to measure. Principal axis factoring method with varimax and equimax was used to examine the validity of the questionnaire in SPSS. Factors were developed where each accounted for several observed variables. The developed factors represent principal components extracted while the weights of variables represent the weights of particular variables contributing to each principal

component. Factor loadings that explain how closely the variables are related to each one of the factors were then computed. The communality, Eigen values, and total sum of squares were also calculated. The amount of variance explained by each principal factor loading and the resulting regression coefficients were used to generate factor scores. The principal factors were then rotated from their beginning positions to enhance the interpretability of the factors. Kaiser's criterion was adopted so that only principal factors with a latent root (Eigen value) greater than 1 were selected for further study (Anderson et. al., 2001).

Reliability of an instrument is the degree of consistency with which it measures a variable (Mugenda and Mugenda, 2003). The questionnaire instrument was pre-tested by giving 10 sets to respondents in Eldoret who will not form part study sample. The answers given were extracted and then the same was repeated after 2 weeks to verify the consistency on how the respondents answered the questions. The results of the pre-test helped in restructuring of the questionnaire by adding the missing questions, removing irrelevant questions and properly phrasing questions that were not clear to the respondents. A comparison of the first and second score was made using Pearson's product moment correlation coefficient to determine the reliability of instruments. Cronbach's coefficient alpha of 0.7 was the bench mark for pilot test.

3.7 Data Analysis Technique

The data was summarized and classified in terms of the variables of the objectives of the study in order to enhance further analysis and processing. The responses to the various items were coded then keyed in a Statistical Package for Social Sciences (SPSS) software program to facilitate addressing the research objectives. Descriptive (frequencies and means) statistics were used for the analysis to help in establishing the findings on the objectives of the study. The

relationship between each of the independent variables (firm size input factors, firm size output factors, and use of information technology) and audit quality was tested using Pearson Correlation Analysis. Computation of regression analysis determined the overall relationship between firm size input factors, firm size output factors, use of information technology and audit quality.

The equation of the regression model was of the form:

$$AQ = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon t$$

The variables are explained as follows:

AQ = Audit Quality (Dependent Variable)

α_0 = Constant associated with the equation of the regression model.

β_1, β_2, β_3 = Coefficients of the independent variables.

X_1 = Firm Size Input Factors

X_2 = Firm Size Process Factors

X_3 = Firm Information Technology Factors

εt = Error Term

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.0 Introduction

This chapter presents the results from the study on "Effect of Audit Firm Size Input, Process Factors and Information Technology Adoption on Audit Quality in Kenya". The study targeted a total of 236 audit firms in Nairobi, Kenya.

4.1 Rate of Response

The total number of questionnaires that were returned in time for analysis was 156, representing a rate of 66%. This is attributed to the fear by some auditors to reveal information relating to their firms to other parties. However, the 66% response rate is still good. According to Saunders, Lewis and Thornhill (2003) a response rate of more than 151 for a sample size of 250 is sufficient. The data had a Cronbach's alpha of 0.877, showing that it was reliable and thus fit for further analysis. The Principal Axis factor analysis showed that a total of 13 extracted components had Eigen values greater than 1.0 and these accounted for 79.4% of the variation in the audit quality in Kenya (Appendix III).

4.1.1 Interpretation of mean from Likert scale

The table below indicates the interpretation of the the means obtained from the Likert Scale responses.

TABLE 1

Interpretation of Mean from Likert Scale

Mean	**Interpretation**
0 – 1.4	Strongly disagreed
1.5 – 2.9	Disagreed
3.0 – 3.4	Neutral/Undecided
3.5 - 4.4	Agreed
4.5 – 5.0	Strongly agreed

The means calculated from the data were interpreted as shown in the table above. These were 0 – 1.4 strongly disagreed, 1.5 – 2.9 disagreed, 3.0 – 3.4 neutral or undecided, 3.5 - 4.4 agreed, and 4.5 – 5.0 strongly agreed.

4.2 Descriptive Statistics

Descriptive statistics was used to help in establishing the findings regarding the objectives of the study.

4.2.1 Respondents' firm characteristics

The respondents were asked about their firm size in order to gauge their own assessment of their firms. The table below shows the results obtained from the analysis:

TABLE 2

Respondent's Firm Size

	N	Minimum	Maximum	Mean	Std. Deviation
Your firm size is big	156	1	5	2.30	1.012
Valid N (listwise)	156				

The results on the firm size indicate that the mean firm size is 2.30, meaning that majority of the firms are small. Calculation of the frequency in terms of small, medium and large shows that 71 (45%) of the firms are small, 69 (44.4%) are medium, while 16 (10.6%) are large. The results thus indicate that majority of the firms in Kenya are small and medium. The results agree with those of Bauwhede & Willekens (2004) that there are more small firms than large ones operating in a country.

4.2.2 Period the firm has been in the auditing practice

The study sought to establish the duration that the firms had been in the auditing practice. The table below shows the results obtained from the analysis

Table 3

Period the firm has been in the Auditing Practice

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 5 years	48	30.8	31.0	31.0
6 to 10 years	40	25.6	25.8	56.8
10-15 years	25	16.0	16.1	72.9
16-20 years	23	14.7	14.8	87.7
Over 20 years	20	12.8	12.3	100.0
Total	156	100.0	100.0	

The trend of the years in which the respondent firms have been in practice shows a decrease of the number of firms as the time in years increases. Thus majority 48 (30.8%) of the

firms had been in the auditing practice for less than 5 years, 40 (25.6%) had been in the auditing practice for between 6 to 10 years, 25 (16%) had been in the auditing practice for between 10 to 15 years, 23 (14.7%) had been in the auditing practice for between 16 – 20 years, and 20 (12.8%) had been in the auditing practice for over 20 years. The mean for the years in which the firms have been in the auditing practice is 2.52 corresponding to a period of between 6 to 10 years. Thus the firms included in the study have sufficient experience and are thus competent to provide information on audit quality in Kenya.

4.2.3 Firm audit practice and communication

The study sought to find out the firms characteristics regarding several factors on their practice and communication that were aimed at establishing the level of engagement between the firm and its clients.

TABLE 4

Firm Audit Practice and Communication

	N	Minimum	Maximum	Mean	Std. Deviation
Audit quality control review					
Use of internal control review	156	1	5	4.12	.852
Expert use	156	1	5	\3.38	1.049
Audit partner activity level					
Manager activity level	156	2	5	4.30	.731
Communication with clients					
Formal and regular	156	1	5	4.04	.901
Informal and regular	156	1	5	3.86	.391
Ad hoc	156	1	5	3.34	1.221
Valid N (listwise)	156				

On how the firm conducts its audit quality control review, the results show that use of internal control review had a mean of 4.12 while use of experts had a mean of 3.38. This means that the respondents agree that internal control review is more regularly used by the audit firms surveyed, compared to the use of experts. The study also sought to establish the activity level of the audit partner or manager. The results show that the activity level of the partner or manager had a mean of 4.30. This means that majority of the respondents agreed that the partners/ managers in their firms were highly active.

On the nature of the communication with clients, the results show that the communication with clients is formal and regular with a mean of 4.04. This means that the respondents agree that majority of the audit firms conduct their communication with clients in a highly formal and

regular manner as opposed to those who agree it is informal and regular (3.86) or those who moderately accept that there is ad hoc communication (3.34).

4.2.4 Period that firm has been having knowledgeable audit team

The study wanted to know the period firms have been having knowledgeable audit team.

TABLE 5

Period that firm has been having Knowledgeable Audit Team

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 3 years	40	25.6	25.6	25.6
4-6 years	36	23.1	23.1	48.7
7-9 years	30	19.2	19.2	67.9
10-12 years	19	12.2	12.2	80.1
Over 12 years	31	19.9	19.9	100.0
Total	156	100.0	100.0	

Regarding the period in which the firm has had a knowledgeable audit team, majority, 40 or 25.6%, of the firms indicated that they have had a knowledgeable audit team for less than 3 years, while 36 (23.1%) said they have had a knowledgeable audit team for between 4 to 6 years, 30 (19.2%) said they have had a knowledgeable audit team for between 7 to 9 years, 19 (12.2%) said they have had a knowledgeable audit team for between 10 to 12 years, and 31 (19.9%) said they have had a knowledgeable audit team for over 12 years. The mean for the period that the firms have had a knowledgeable audit team is 2.78 corresponding to between 4 to 6 years. Thus most of the firms have had sufficient experience in audit in order to provide the necessary information for this study.

4.2.5 ISQC 1 implementation in firms

The study sought to know how implementation of ISQC I in firms affected several factors in the audit firms as a means of determining its importance in enhancing audit quality. The results are as shown in Table 6 below.

TABLE 6

ISQC 1 Implementation in Firms

	N	Minimum	Maximum	Mean	Std. Deviation
ISQC 1 address of differences between small and larger firms					
ISQCI all firms equal	155	1	5	3.38	1.355
ISQCI large firms upper hand	156	1	5	3.13	1.473
ISQCI smaller firm different	156	1	5	3.11	1.323
How implementation of ISQC 1 differs in small and large firms					
Small firms structured	156	1	5	3.76	1.042
Communication informal	156	1	5	3.41	1.185
Structured process	156	1	5	2.81	1.131
Valid N (listwise)	156				

The study sought to find out how ISQC 1 addresses the fact that the factors of a smaller firm are significantly different from those of a larger firm. As shown in Table 6 above, there is no significant difference between small and large firms as the means for smaller firms are different (mean = 3.11) and all firms have an upper hand (mean = 3.13) are almost equal, while that all firms are equal when it comes to audit quality has a higher mean of 3.38. This means that the respondents moderately agree that all firms are equal when it comes to audit quality. The results agree with other surveys that have found no difference between large audit firms and

smalls ones in terms of their impact on audit quality, both of them have the potential to reach an acceptable level audit quality (Bauwhede & Willekens, 2004; Jackson, Moldrich, & Roebuck, 2008; Larn & Chang, 1994).

On how the implementation of ISQC 1 in a smaller firm differs from that in a larger firm, the results show that the respondents agree that smaller firms may use less structured means and simpler processes (mean = 3.76), and that communications may be more informal in smaller firms (3.41). However they are undecided on whether structures, process and communication are similar across firms (mean = 2.81).

4.2.6 Firm size input factors

The study sought to find out how firm size input factors affect compliance to audit standards. The table below shows the results obtained from the analysis:

TABLE 7

Firm Size Input Factors

	N	Minimum	Maximum	Mean	Std. Deviation
There are enough employees in our firm	156	1	5	3.33	1.292
The firm has more than 2 partners	156	1	5	2.92	1.353
The firm's values, culture and ethics are excellent	156	1	5	3.78	1.052
We have many clients in most cases big corporate	156	1	5	2.41	1.071
Our quasi-rent is big enough	156	1	5	2.98	1.045
Staff /partners are qualified as per the regulation	156	2	5	4.10	.805
Staff/partners are experienced as per the regulation	156	2	5	4.32	.681
Staff are allocated adequate time on audit work	156	2	5	4.31	.717
Audit team are objective and independent	156	2	5	4.33	.615
Audit firm has effective governance	156	2	5	4.12	.718
Valid N (listwise)	156				

According to the results, the respondents are undecided on whether there are enough employees in the firm (mean = 3.33). This means that the firms have fewer employees than are needed to carry out the work involved. On whether the firm has more than 2 partners the mean was (2.92), meaning that most of the firms have only one partner. The mean on the firm's values, culture and ethics are excellent was 3.78, meaning that these are held in high regard by the audit

firms as it corresponds to agreement with the statement. The results for big corporate clients (mean =2.41), means that majority of the firms do not have big corporate clients. The result for the quasi-rent being big enough (mean = 2.98), means that it is moderate for most firms. The result for staff and partners are qualified as per the regulation (mean = 4.10) means that the firms employ qualified staff. Staff and partners are experienced as per the regulation (mean = 4.32) means that the firms have experienced staff. Staff and partners have adequate time allocation on audit assignments (mean = 4.31) means that the firms allocate sufficient time for their staff to complete assignments. Audit teams are objective and independent (mean = 4.33) means the audit teams are given sufficient freedom to carry out their work without interference. The result for audit firm has effective governance (mean = 4.12) means that the respondents agree that the partners practice fair and transparent governance while managing their firms.

The results agree with those of IAASB (2014), that partners and staff should be allocated enough time and availed enough resources to handle difficult areas whenever they arise; engagement teams being structured in such a way as to include all specialties within the organization; and that the staff should be well motivated.

4.2.7 Firm size process factors

The study sought to find out how firm size process factors affect compliance to audit standards. The table below shows the results obtained from the analysis:

TABLE 8

Firm Size Process Factors

	N	Minimum	Maximum	Mean	Std. Deviation
Engagement team comply with audit standards	154	1	5	4.36	3.524
The team use appropriate Audit Process	156	2	5	4.13	.801
The team members work is subjected supervision and rigorous review	156	2	5	4.11	.800
The team members are compelled to go through all audit documentations	155	1	5	4.04	.953
Firm is reviewed by ICPAK for compliance	155	1	5	3.78	1.077
Audit team goes through continuous professional development	156	2	5	4.04	.860
Valid N (listwise)	154				

On the firm size process factors, the results show that the respondents agree that engagement teams are compliant to all audit standards (mean = 4.36), the teams use appropriate audit processes (mean = 4.13), the team member's work is subjected supervision and rigorous review (mean = 4.11), the team members are compelled to go through all audit documentations (mean = 4.04), the firm has been reviewed by ICPAK for compliance (mean = 3.78), and the audit team goes through continuous professional development (mean = 4.04). The high means of more 4.0 for the mean means that the audit processes are conducted in a professional manner in all the firms. It is significant to note that review by ICPAK for compliance had the lowest mean at 3.78, showing that perhaps the professional body is not able to conduct the inspections as regularly as it should due to the high number of audit firms.

The results agree with those of Cushing and Lobbecke (1986) who examined audit materials of 12 large firms in the US and found that firms with structured audit approaches have: a systematic approach to auditing characterized by a prescribed, logical sequence of procedures, decisions, and documentation steps.

4.2.8 Adoption of information technology

The study sought to find out how adoption of information technology by the firm affects audit quality. Table 9 shows the results obtained from the analysis:

TABLE 9

Adoption of Information Technology

	N	Minimum	Maximum	Mean	Std. Deviation
The firm has invested a lot in ICT	156	1	5	3.55	1.171
The firm has up to date ICT facilities	156	2	5	3.53	1.074
The firm has specialized auditing software	156	1	5	3.12	1.372
The firm has installed internet in the premises	152	1	5	3.57	1.254
Audit team has gone for training in ICT	156	1	5	3.63	1.042
Valid N (listwise)	152				

According to the respondents, the firms perform moderately with respect to adoption of information technology with the firm having invested a lot in ICT having a mean of 3.55, the firm has up to date ICT facilities (mean = 3.53), the firm has specialized auditing software (mean = 3.12), the firm has installed internet in the premises (mean = 3.57), and audit teams have gone for training in ICT (mean = 3.63). The highest is audit teams have gone for training in ICT with a mean of 3.63, which means that the firms do appreciate the importance of ICT in the auditing process. These results are consistent with those of James et. al. (2001), who found that software packages are capable of improving audit efficiency by performing a variety of audit tasks that previously were completed manually, and are also be used for fraud detection.

4.2.9 Indicators of audit quality

The study sought to find out the indicators of audit quality from the respondents. The results are as shown in the table below:

Financial Statement Disclosure and Reliability. The study sought to find out the indicators of audit quality regarding financial statement disclosure and reliability. Table 10 shows the results obtained from the analysis:

TABLE 10

Financial Statement Disclosure and Reliability

	N	Minimum	Maximum	Mean	Std. Deviation
Auditor's Reports to Users of Audited Financial Statements	156	1	5	3.88	1.204
Auditor's Reports to Those Charged with Governance	156	1	5	3.65	1.237
Auditor's Reports to Management	156	1	5	3.72	1.237
Auditor's Reports to Financial and Prudential Regulators	152	1	5	3.43	1.295
Financial statements are error free	154	1	5	3.46	1.205
Assertions are backed with support documents	156	1	5	3.69	1.190
Valid N (listwise)	150				

On the indicators of audit quality regarding financial statement disclosure and reliability, the firms scored moderately with respect to all the factors. Auditor's reports to users of audited financial statements had a mean of 3.88, auditor's reports to those charged with governance

(mean = 3.65) auditor's reports to management (mean = 3.72) auditor's reports to financial and prudential regulators (mean = 3.73) financial statements are errors free (mean = 3.46), and assertions are backed with support documents (mean = 3.69). This means the firms do not adhere to the laid down procedures on financial statement disclosure and reliability. Previous scholars have found that the audit improves the quality of financial information to investors. An auditor can improve the quality of the input data by finding errors and by making employees more careful in preparing records. More accurate data will improve decision-making internally; and credit and investment analysis, labor negotiations or regulation decisions will also improve managers' performance externally (Wallace 1980, 1987, 2004).

Assurance of internal control: The study sought to find out the indicators of audit quality regarding assurance of internal control. The table below shows the results obtained from the analysis:

TABLE 11

Assurance of Internal Control

	N	Minimum	Maximum	Mean	Std. Deviation
Audit report is based on ISQC1 standard	154	1	5	3.96	1.072
Audit report is valued by the client	156	1	5	3.79	1.107
Audit work is subject to thorough supervision and review	156	1	5	4.02	1.032
Auditors explain audit requirements to the clients	156	1	5	4.01	1.000
Client is comfortable sharing sensitive information with the auditors	156	1	5	3.66	1.161
Auditors communicate to clients continuously on important information	156	1	5	4.00	1.010
Client's accountants have poor accounting backgrounds	156	1	5	3.01	1.239
Clients have poor internal controls due to lack of qualified personnel	156	1	5	3.19	1.213
Clients' personnel are often unaware of the audit	156	1	5	2.94	1.222
Valid N (listwise)	154				

On the indicators of audit quality regarding assurance of internal control, the firms scored moderately or better on all the factors. Whether the audit report is based on ISQC1 standard had a mean of 3.96, audit report is valued by the client (mean = 3.79) audit work is subject to thorough supervision and review (mean = 4.02) auditors explain audit requirements to the clients (mean = 4.01) client is comfortable sharing sensitive information with the auditors (mean = 3.66) auditors communicate to clients continuously on important information (mean = 4.00) client's accountants have poor accounting backgrounds (mean =3.01) clients have poor internal controls due to lack of qualified personnel (mean = 3.19) clients' personnel are often unaware of the audit (mean = 2.94). The results mean that the firms have sufficient internal control mechanisms to ensure audit quality.

These results agree with those of Wallace (1980, 1987, 2004), who found that an audit improves the financial information utilized by managers when making decisions. An auditor is able to identify errors and advice clients on the same to avoid future mistakes. This can only be achieved when the internal control mechanisms are excellent so as to ensure that the quality of the final audit report is okay.

Going concern warning. The study sought to find out the indicators of audit quality regarding going concern warning. Table 12 shows the results obtained from the analysis:

TABLE 12

Going Concern Warning

	N	Minimum	Maximum	Mean	Std. Deviation
Audit is carried out for the client financial year	154	1	5	3.94	.968
Auditor compares performance with previous years	156	1	5	4.09	.946
Auditors are able to predict different scenarios	156	1	5	3.88	.990
Auditor expresses going concern in client report	156	1	5	4.02	1.000
Valid N (listwise)	154				

On the indicators of audit quality regarding going concern warning, the firms scored fairly highly on the polled factors. Audit is carried out for the client financial year had a mean of 3.94, auditors compare performance with previous years (mean = 4.09), and auditors are able to predict different scenarios (mean = 3.88), and auditors express going concern in client report (mean = 4.02). This means that professionalism is exhibited by the firms with regard to the going concern warning to the clients on the performance of their organizations.

Audit committee communication: The study sought to find out the indicators of audit quality regarding audit committee communication so as to establish the nature of the communication

used in the audit firms. The results are as shown in the table below Table 13 shows the results obtained from the analysis:

TABLE 13

Audit Committee Communication

	N	Minimum	Maximum	Mean	Std. Deviation
Firm gets communication from audit committee	151	1	5	3.15	1.031
Firm is usually ranked by audit committee	154	1	5	3.27	.917
Valid N (listwise)	151				

On the indicators of audit quality regarding audit committee communication, the firms had a moderate score on both factors considered. Audit firm frequently gets communication from audit committee had a mean of 3.15 while audit firm is ranked by audit committee as a matter of quality concern had a mean of 3.27. This means that the communication and ranking of the firm by the audit committee is not highly followed.

4.3 Inferential Statistics

Inferential statistics was done in order to establish the relationship between each of the independent variables (firm size input factors, firm size output factors, and adoption of information technology) and audit quality. These were carried out while testing the hypotheses in line with the objectives of the study.

4.3.1 Objective I: Effect of firm size input factors on audit quality in Kenya

The correlation between the firm size input factors and audit quality was calculated using Pearson's Correlation in order to establish the relationship between the two variables. The table below shows the results obtained from the analysis:

TABLE 14

Correlation between Firm Size Input Factors and Audit Quality

		Audit quality	Input factors
Audit quality	Pearson Correlation	1	.382**
	Sig. (2-tailed)		.000
	N	156	156
Input factors	Pearson Correlation	.382**	1
	Sig. (2-tailed)	.000	
	N	156	156

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

The study sought to determine whether firm size input factors had a significant effect on audit quality. A correlation analysis done on this indicated that a significant relationship indeed exists as shown in Table 14. The Pearson's product moment coefficient of correlation $r = 0.382$, $\alpha = 0.01$ ($p < 0.001$) is significant and suggests that a there is a moderate positive relationship between firm size input factors and audit quality. This leads to the rejection of the null hypothesis. We thus state that there is a significant relationship between firm size input factors and audit quality.

4.3.2 Objective II: Impact of firm size process factors on audit quality in Kenya

The correlation between the firm size process factors and audit quality was calculated using Pearson's Correlation whose results are as follows:

TABLE 15

Correlation between Firm Size Process Factors and Audit Quality

		Audit quality	Process factors
Audit quality	Pearson Correlation	1	.184**
	Sig. (2-tailed)		.000
	N	156	156
Process factors	Pearson Correlation	.184**	1
	Sig. (2-tailed)	.000	
	N	156	156

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

The study sought to determine whether firm size process factors had a significant effect on audit quality. A correlation analysis done on this indicated that a significant relationship indeed exists as shown in Table 15. The Pearson's product moment coefficient of correlation $r = 0.184$, $\alpha = 0.01$ ($p < 0.001$) is significant and suggests that a there is a weak positive relationship between firm size process factors and audit quality. This leads to the rejection of the null hypothesis. We thus state that there is a significant relationship between firm size process factors and audit quality.

4.3.3 Objective III: Effect of information technology adoption on audit quality in Kenya

The correlation between adoption of information technology and audit quality was calculated using Pearson's Correlation whose results are as follows:

TABLE 16

Correlation between Adoption of Information Technology and Audit Quality

		Audit quality	IT factors
Audit quality	Pearson Correlation	1	.460**
	Sig. (2-tailed)		.000
	N	156	156
IT factors	Pearson Correlation	.460**	1
	Sig. (2-tailed)	.000	
	N	156	156

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

The study sought to determine whether adoption of information technology had a significant effect on audit quality. A correlation analysis done on this indicated that a significant relationship indeed exists as shown in Table 16. The Pearson's product moment coefficient of correlation $r = 0.460$, $\alpha = 0.01$ ($p < 0.001$) is significant and suggests that a there is a moderate positive relationship between adoption of information technology and audit quality. This leads to the rejection of the null hypothesis. The study concludes that there is a significant relationship between adoption of information technology and audit quality in Kenya.

4.3.4 Objective IV: Relationship between firm size input factors, firm size process factors and information technology adoption and audit quality in Kenya

Use of regression analysis assisted in determining the relationship between firm size input factors, firm size process factors and information technology adoption and audit quality in Kenya. The results show that indeed the independent variables (firm size input factors, firm size process factors and information technology adoption) affect the level of audit quality in Kenya. The results of the regression analysis are as shown in Tables 17, 18, and 19, below.

TABLE 17

Regression analysis between Firm Size Input and Process Factors and Adoption of Information Technology and Audit Quality

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	.506[a]	.256	.253	1.080	1.801

a. Predictors: (Constant), IT factors, Process factors, Input factors

b. Dependent Variable: Audit quality

The coefficient of determination (Adjusted R^2) indicates the strength of the variables selected. The Adjusted R^2 statistic of 0.253 indicates that the selected predictor variables (firm size input factors, firm size output factors and adoption of information technology) account for 25.3% of the variation in the audit quality. This means that even though the selected predictor variables are significant in determination of the dependent variable (audit quality), there are still other variables that influence audit quality that are not captured in this particular model. The Durbin-Watson statistic of 1.801 indicates that the predictor variables are not auto-correlated since it is greater than 0.8 (White, 1992). Thus the data collected is not uniform and the differences between the means for the responses are significant.

TABLE 18

ANOVA using Audit Quality

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	277.623	3	92.541	79.356	.000[a]
Residual	805.807	691	1.166		
Total	1083.430	694			

a. Predictors: (Constant), IT factors, Process factors, Input factors b. Dependent Variable: Audit quality

The $F_{Table(3,691)}$ value of 2.6049 is lower than the $F_{calculated}$ value of 79.356 hence we reject the null hypothesis at α=0.05 significance level. We therefore accept the model generated for determining audit quality using the firm size input factors, firm size output factors and adoption of information technology. It thus means that firm size input factors, firm size output factors, and adoption of information technology affect audit quality in Kenya.

TABLE 19

Correlation Coefficients for the Independent Variables using Audit Quality

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
			Std. Error	Beta		Sig.	Lower Bound	Upper Bound
	(Constant)	1.593	.145		10.956	.000	1.307	1.878
	Input factors	.210	.035	.223	6.039	.000	.141	.278
	Process factors	.020	.023	.031	.881	.378	-.024	.064
	IT factors	.371	.038	.359	9.818	.000	.297	.445

a. Dependent Variable: Audit quality

The correlation coefficient table shows that the constant for the model generated from the data is 1,593, while the coefficients for the independent variables are 0,223, 0.031, and 0.359, for firm size input factors, firm size process factors, and adoption of information technology, respectively. The model generated from the study is thus:

$AQ = 1.593 + .223X_1 + .031X_2 + .359X_3$

Where: AQ = Audit Quality (Dependent Variable)

X_1 = Firm Size Input Factors

X_2 = Firm Size Process Factors

X_3 = Firm Information Technology Factors

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and recommendation the results from the study on "Effect of Audit Firm Size Input, Process Factors and Information Technology Adoption on Audit Quality in Kenya".

5.2 Summary of the Findings

The results on the firm size indicate that the mean firm size is 2.30, meaning that majority of the firms are small. Calculation of the frequency in terms of small, medium and large shows that 71 (45%) of the firms are small, 69 (44.4%) are medium, while 16 (10.6%) are large. The trend of the years in which the respondent firms have been in practice shows a decrease of the number of firms as the time in years increases. The mean for the years in which the firms have been in the auditing practice is 2.52 corresponding to a period of between 6 to 10 years. Thus the firms included in the study have sufficient experience and are thus competent to provide information on audit quality in Kenya.

The results on review of audit work show that use of internal control review had a higher mean than that for use of experts. This means that internal control review is more regularly used by the audit firms surveyed, compared to the use of experts. On the activity by audit partners, the results show that the activity level of the partner or manager had a mean of 4.30. This means that majority of the respondents agreed that the partners/ managers in their firms were highly active.

The results show that the communication with clients is formal and regular with mean of 4.04. This means that majority of the audit firms conduct their communication with clients in a highly formal manner as opposed to informal or ad hoc communication

The mean for the period that the firms have had a knowledgeable audit team is 2.78 corresponding to between 4 to 6 years. Thus most of the firms have had sufficient experience in audit in order to provide the necessary information for this study.

The results show that according to the respondents, there is no significant difference between small and large firms as the means for large firms have upper These results agree with other surveys that have found no difference between large audit firms and smalls one in terms of their impact on audit quality, both of them have the potential to reach an acceptable level audit quality (Bauwhede & Willekens, 2004; Jackson, Moldrich, & Roebuck, 2008; Larn & Chang, 1994).

5.2.1 Firm size input factors

The results on firm size input factors show that the firms predominantly employ qualified staff, staff and partners are experienced as per the regulation, and that the firms allocate sufficient time for their staff to complete assignments. They also indicate that the audit teams are given sufficient freedom to carry out their work without interference, and that the partners practice fair and transparent governance while managing their firms. These results are consistent with those of James et. al. (2001), who found that software packages are capable of improving audit efficiency by performing a variety of audit tasks that previously were completed manually, and are also be used for fraud detection.

5.2.2 Firm size process factors

The high means of more 4.0 for the mean means that the audit processes are conducted in a professional manner in all the firms. It is significant to note that review by ICPAK for compliance had the lowest mean at 3.78, showing that perhaps the professional body is not able to conduct the inspections as regularly a it should due to the high number of audit firms. The results agree with those of Cushing and Lobbecke (1986) who examined audit materials of 12 large firms in the US and found that firms with structured audit approaches have: a systematic approach to auditing characterized by a prescribed, logical sequence of procedures, decisions, and documentation steps.

5.2.3 Adoption of information technology

According to the respondents, the firms perform moderately with respect to adoption of information technology with the firm having invested a lot in ICT having a mean of 3.55, the firm has up to date ICT facilities (3.53), the firm has specialized auditing software (3.12), the firm has installed internet in the premises (3.57), and audit teams have gone for training in ICT (3.63). The highest is audit teams have gone for training in ICT with a mean of 3.63, which means that the firms do appreciate the importance of ICT in the auditing process.

5.2.4 Indicators of audit quality

On the indicators of audit quality regarding financial statement disclosure and reliability, the firms scored moderately with respect to all the factors. This means the firms do not adhere to the laid down procedures on financial statement disclosure and reliability. Therefore, the results are not consistent with those of previous scholars who found that the audit improves the quality of financial information to investors. An auditor can improve the quality of the input data by

finding errors and by making employees more careful in preparing records. More accurate data will improve decision-making internally; and credit and investment analysis, labor negotiations or regulation decisions will also improve managers' performance externally (Wallace 1980, 1987, 2004).

On the indicators of audit quality regarding assurance of internal control, the firms scored moderately or better on all the factors. The results mean that the firms have sufficient internal control mechanisms to ensure audit quality. This can be attributed to the fact that the firms follow the ISQC 1 guidelines. On the indicators of audit quality regarding going concern warning, the firms scored fairly highly on the polled factors. This means that professionalism is exhibited by the firms with regard to the going concern warning to the clients on the performance of their organizations. On the indicators of audit quality regarding audit committee communication, the firms had a moderate score on both factors considered, meaning that the communication and ranking of the firm by the audit committee is not highly followed.

5.2.5 Objective I: Effect of firm size input factors on audit quality in Kenya

The study sought to determine whether firm size input factors had a significant effect on audit quality. The Pearson's product moment coefficient of correlation $r = 0.382$, $\alpha = 0.01$ ($p < 0.001$) is significant and suggests that a there is a moderate positive relationship between firm size input factors and audit quality. This leads to rejection of the null hypothesis. We thus state that there is a significant relationship between firm size input factors and audit quality.

5.2.6 Objective II: Impact of firm size process factors on audit quality in Kenya

The study sought to determine whether firm size process factors had a significant effect on audit quality. The Pearson's product moment coefficient of correlation $r = 0.184$, $\alpha = 0.01$ ($p < 0.001$)

is significant and suggests that a there is a weak positive relationship between firm size process factors and audit quality. This leads to the rejection of the null hypothesis. We thus state that there is a significant relationship between firm size process factors and audit quality.

5.2.7 Objective III: Effect of information technology adoption on audit quality in Kenya

The study sought to determine whether adoption of information technology had a significant effect on audit quality. The Pearson's product moment coefficient of correlation $r = 0.460$, $\alpha = 0.01$ ($p < 0.001$) is significant and suggests that a there is a weak positive relationship between adoption of information technology and audit quality. This leads to the rejection of the null hypothesis. We thus state that there is a significant relationship between adoption of information technology and audit quality in Kenya.

5.2.8 Objective IV: Relationship between firm size input and process factors and information technology adoption and audit quality in Kenya

Use of regression analysis determined the relationship between firm size input and process factors and information technology adoption and audit quality in Kenya. The Adjusted R^2 statistic of 0.253 indicates that the selected predictor variables (firm size input factors, firm size output factors and adoption of information technology) account for 25.3% of the variation in the audit quality. This means that even though the selected predictor variables are significant in determination of the dependent variable (audit quality), there are still other variables that influence audit quality that are not captured in this particular model. The model generated from the study is:

$$AQ = 1.593 + .223X_1 + .031X_2 + .359X_3$$

Where:

AQ = Audit Quality (Dependent Variable)

X_1 = Firm Size Input Factors

X_2 = Firm Size Process Factors

X_3 = Firm Information Technology Factors

The $F_{Table(3,691)}$ value of 2.6049 is lower than the $F_{calculated}$ value of 79.356 hence we fail to accept the hypothesis at α=0.05 significance level. We therefore accept the model generated for determining audit quality using the firm size input factors, firm size output factors and adoption of information technology.

5.3 Conclusion

Several conclusions can be made from the study based on the objectives of the study. These are as follows:

On objective I the aim was to determine the effect of firm size input factors on audit quality in Kenya. The results show that there is a moderate positive relationship between firm size input factors and audit quality. The audit firms should therefore continue to ensure that the firm size input factors are properly aligned with the ISQC 1 guidelines.

Objective II was to determine the impact of firm size process factors on audit quality in Kenya. The results show that there is a weak positive relationship between firm size process factors and audit quality. Hence, the study concludes that audit firms in Kenya perform below par with respect to their processes. The firms should therefore improve their focus on the process factors as required by the ISQC 1 guidelines.

Objective III was to evaluate the effect of information technology adoption on audit quality in Kenya. The results show that there is a moderate positive relationship between

adoption of information technology and audit quality. Thus the study concludes that the audit firms in Kenya have adopted the information technology

Objective IV was to determine the relationship between firm size input factors, firm size process factors and information technology adoption and audit quality in Kenya. The model generated from the study is:

$$AQ = 1.593 + .223X_1 + .031X_2 + .359X_3$$

Where:

AQ = Audit Quality (Dependent Variable)

X_1 = Firm Size Input Factors

X_2 = Firm Size Process Factors

X_3 = Firm Information Technology Factors

The study therefore concludes that the audit firms in Kenya generally focus on the firm size input factors and adoption of information technology but not on the processes involved in the audit procedures. They have a keen interest on the firm size input factors such as engaging qualified and experienced staff as well as training their staff in information and communication technology. However, this keenness is not exercised while carrying out the actual audit process as evidenced with the low means on firm size process factors and weak positive correlation between firm size process factors and audit quality.

5.4 Recommendations

The study makes the following recommendations for policy implications and for further research.

5.4.1 Recommendation for policy

The study recommends that the regulating body (ICPAK) should make more thorough inspections of audit firms to ensure that audit processes are uniformly applied among the audit firms so as to enhance audit quality in Kenya.

ICPAK should also come up with software which can assist audit firms in carrying out their work and ensuring that IFRSs are fully implemented.

5.4.2 Recommendation for further research

The study recommends that a thorough study be done on the audit processes to identify the weak areas such as failure of the regulating body (ICPAK) to conduct regular inspections of the firms in practice. Another study can also be conducted focusing on the specific information technology hardware and software products that are utilized by the firms in order to determine their effectiveness in ensuring a quality audit for clients.

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APPENDICES

APPENDIX I

Specimen Introductory Letter to the Respondents

KCA University,

P.O. Box 56808-00200

NAIROBI

Dear Sir/Madam,

I am a graduate student pursuing a Master of Science in Commerce degree at KCA University. I am currently carrying out a research project on "**Effect of Audit Firm Size input factors, Firm Size Process factors and Information Technology adoption on Audit Quality in Kenya".**

The purpose of this questionnaire is to gather information from auditing firms on Effect of Audit Firm Size on Audit Quality. You have been selected as one of the respondents with that kind of knowledge and experience which assist the researcher in providing the necessary data for the study. My supervisors and I assure you that the information supplied will be used for research purposes only and your name and views will be treated with confidentially it deserves.

Thank you for your cooperation.

CPA Sammy Thuo Kangea

Masters of Science in Commerce student

APPENDIX II

Questionnaire to Audit Firms

The questions below concern the audit quality compliance by the registered auditors. Please respond to the same and note that the information you give will be treated with utmost confidentiality.

Part I: Respondent Bio – Data

Please respond by ticking/ marking (**X**) on Strongly Agree - SA, Agree - A, Undecided - U, Disagree - D and Strongly Disagree - SD on the following items regarding your audit firm.

		SD (1)	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
1	Your firm is big in size					
2	For how many years has the firm been in the auditing practice?	< 5 years	6 - 10 years	10 – 15 years	16 – 20 years	>20 years
3	How do you conduct your audit quality control review?					
a	Use of internal control review					
b	Use of expert review					
4	Activity level of Audit Partner/Manager is high					
5	The nature and frequency of communication with clients is formal and regular					
6	How long have you been having a knowledgeable audit team?	<3 years	4-6 years	7 – 9 years	10 – 12 years	>12 years
7	With respect to ISQC1 are smaller firms significantly different from larger firms?					
8	Large firms have an upper hand in audit quality					
9	All firms have an upper hand in audit quality					
10	How might implementation of ISQC1 in a smaller firm differ from that in a larger firm?					
a	Smaller firms may use less structured means and simpler processes					
b	Communications may be more informal in smaller					

	firms					
c	Structures, process and communication are similar across firms					

PART II: Audit Input Factors

Please respond by ticking Strongly Agree - SA, Agree - A, Undecided - U, Disagree - D and Strongly Disagree - SD on the following audit input factors that influence audit quality.

Audit Input Factors	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
There are enough employees in our firm					
The firm has more than 2 partners					
The firm's values, culture and ethics are excellent					
We have many clients in most cases big corporate					
Our quasi-rent is big enough					
Staff and partners are qualified as per the regulation					
Staff and partners are experienced as per the regulation					
Staff and partners have adequate time allocation on audit assignments					
Audit team are objective and independent					
Audit firm has effective governance					

Part III: Audit Process Factors

Please respond by ticking Strongly Agree - SA, Agree - A, Undecided - U, Disagree - D and Strongly Disagree - SD on the following audit process factors that influence the audit quality.

Audit Process Factors	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
Engagement team are compliant to all audit standards					
The team use appropriate Audit Process					
Team members work is subjected supervision and rigorous review					
The team members are compelled to go through all audit documentations					
Firm has been reviewed by ICPAK for compliance					
Audit team goes through continuous professional development					

Part IV: Information Technology Factors

Please respond by ticking Strongly Agree - SA, Agree - A, Undecided - U, Disagree - D and Strongly Disagree - SD on the following information technology factors influencing audit quality.

Use of Information Technology	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
The firm has invested a lot in ICT					
The firm has up to date ICT facilities					
The firm has specialized auditing software					
The firm has installed internet in the premises					
Audit team has gone for training in ICT					

PART V: Audit Quality Factors

Please respond by ticking Strongly Agree - SA, Agree - A, Undecided - U, Disagree - D and Strongly Disagree - SD on the following audit quality factors.

Financial Statement Disclosure and Reliability	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
Auditor's Reports to Users of Audited Financial Statements					
Auditor's Reports to Those Charged with Governance					
Auditor's Reports to Management					
Auditor's Reports to Financial and Prudential Regulators					
Financial statements are error free					
Assertions are backed with support documents					

Assurance of Internal Control	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
Audit report is based on ISQC1 standard					
Audit report is valued by the client					
Audit work is subject to thorough supervision and review					
Auditors explain audit requirements to the clients					
Client is comfortable sharing sensitive information with the auditors					
Auditors communicate to clients continuously on important information					
Client's accountants have poor accounting backgrounds					
Clients have poor internal controls due to lack of qualified personnel					
Clients' personnel are often unaware of the audit					

Going Concern warning	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
Audit is carried out for the client financial year					
Auditor compare performance with previous years					
Auditors are able to predict different scenarios					
Auditors expresses going concern in client report					
Audit Committee Communication	**SD (1)**	**D (2)**	**U (3)**	**A (4)**	**SA (5)**
Audit firm frequently gets communication from audit committee					
Audit firm is ranked by audit committee as a matter of quality concern					

The End

Thank You for Your Cooperation

APPENDIX III

Principal Axis Extraction

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.773	25.041	25.041	13.555	24.646	24.646
2	6.827	12.412	37.453	6.570	11.946	36.591
3	3.843	6.988	44.441	3.54	6.436	43.027
4	3.523	6.405	50.845	3.274	5.953	48.980
5	2.719	4.944	55.790	2.444	4.443	53.424
6	2.542	4.622	60.412	2.310	4.200	57.623
7	1.990	3.618	64.030	1.684	3.062	60.685
8	1.622	2.948	66.979	1.376	2.502	63.187
9	1.512	2.749	69.728	1.244	2.262	65.449
10	1.481	2.692	72.420	1.189	2.162	67.610
11	1.449	2.635	75.055	1.157	2.104	69.715
12	1.260	2.291	77.346	.960	1.745	71.459
13	1.113	2.023	79.369	.857	1.559	73.018
14	.996	1.811	81.180			
15	.972	1.768	82.948			
16	.874	1.588	84.536			
17	.855	1.555	86.091			
18	.743	1.350	87.441			
19	.708	1.287	88.728			
20	.664	1.208	89.936			
21	.550	.999	90.935			
22	.542	.985	91.920			
23	.501	.912	92.832			
24	.453	.824	93.656			
25	.398	.724	94.379			
26	.360	.654	95.034			
27	.326	.592	95.626			

28	.315	.574	96.199			
29	.290	.528	96.727			
30	.241	.439	97.166			
31	.219	.398	97.564			
32	.198	.361	97.925			
33	.171	.312	98.236			
34	.135	.245	98.481			
35	.129	.235	98.716			
36	.114	.208	98.924			
37	.100	.182	99.105			
38	.093	.169	99.275			
39	.065	.118	99.393			
40	.060	.110	99.502			
41	.059	.108	99.610			
42	.045	.081	99.691			
43	.040	.073	99.764			
44	.032	.059	99.822			
45	.027	.049	99.871			
46	.020	.037	99.908			
47	.015	.028	99.936			
48	.013	.024	99.960			
49	.009	.016	99.976			
50	.005	.010	99.986			
51	.004	.007	99.993			
52	.002	.004	99.997			
53	.001	.002	99.998			
54	.001	.001	100.000			
55	.000	.000	100.000			

Extraction Method: Principal Axis Factoring.

The Principal Axis factor analysis showed that a total of 13 extracted components had Eigen values greater than 1.0 and these accounted for 79.4% of the variation in the audit quality in Kenya.

APPENDIX IV

Factor Matrix

	Factor									
	1	2	3	4	5	6	7	8	9	10
Your firm size is big	.238	.103	-.594	-.105	-.026	.160	.411	.086	.072	-.167
Years firm has been in auditing practise	.265	.221	-.525	-.473	.176	-.140	.321	-.077	-.080	-.024
Use of internal control review	.332	.356	-.171	.143	-.567	-.054	.111	.129	-.130	.188
Expert_use	.392	.367	-.186	-.048	.367	-.049	-.074	.207	-.260	-.272
Manager_activity_level	.134	.006	.234	.295	-.077	-.289	.111	.091	.065	-.197
Formal_communication	.446	.564	-.001	.305	-.325	.034	.177	.042	.008	-.201
Knowledgeable_audit	.202	.128	-.580	-.403	.123	-.054	.226	-.095	-.076	-.115
ISQCI_smaller_firm_differ	.021	-.333	-.171	.009	.338	.239	.080	.278	.301	-.022
ISQCI_large_firms_upperhand	.048	-.528	.127	.274	.116	.317	.177	-.045	-.103	.077
ISQCI_all_firms_equal	.333	.466	.202	-.051	-.130	-.147	.064	.082	-.005	.319
Small_firms_structured	.009	.077	.460	-.088	-.056	.101	.425	-.126	.020	.082
Communication_Informal	.023	-.193	.337	.337	.165	.233	.336	-.091	-.212	.353
Structured_process	.451	.419	.004	.007	-.098	.099	.303	-.096	.078	.152
Input_employees	.528	.402	.077	.013	.276	-.150	.265	-.024	-.116	-.204
Input_more_partners	.273	.147	-.323	-.015	.480	.189	.059	.182	-.385	.332

Input_value_importance	.463	.220	.227	-.269	.063	-.092	.228	-.121	.018	-.215
Input_big_corporates	.280	.339	-.438	.101	.302	.021	-.135	.166	.242	.080
Input_quasi_rent	.147	.462	-.429	-.061	.044	.043	-.082	.068	-.027	-.087
Input_qualified_staff	.308	.270	.413	-.518	.200	-.130	.178	-.254	.173	.004
Input_staff_experienced	.446	.390	.337	-.370	.204	.114	.136	-.100	.321	.152
Input_adequate_audit_time	.523	.414	.412	-.179	.010	.053	-.160	.078	.085	-.061
input_team_objective	.542	.358	.413	.055	-.023	.072	-.104	.166	-.113	-.260
Input_effective_governance	.660	.232	.284	.046	-.182	.036	-.066	.119	-.229	-.099
Process_team_compliant	-.116	.440	.260	-.029	-.016	-.108	.096	.097	.073	.036
Process_approriate_auditing	.610	.442	.114	-.183	.164	.136	-.296	.256	-.065	.078
Process_team_supervision	.667	.272	.189	-.051	.164	.060	-.110	.224	.218	.071
Process_team_review_documents	.642	.493	.051	-.138	-.185	-.058	-.171	.141	-.080	.223
Process_ICPAK_compliant	.411	.409	.031	.089	.080	.266	.115	-.081	-.051	-.055
Process_team_development	.296	-.042	.444	-.103	.158	.352	-.066	-.169	-.100	-.056
IT_invested	.407	.409	-.238	.501	.175	.238	-.043	-.286	.081	.017
IT_facilities_updated	.438	.294	-.150	.497	.159	-.092	-.170	-.476	.072	-.060
IT_auditing_software	.221	.440	-.238	.482	.186	-.186	.011	-.318	.154	.113
IT_internet_installed	.392	.458	.085	.263	.160	-.103	-.095	-.042	-.265	-.082

IT_team_trained	.246	.009	.071	.460	.389	-.032	-.291	-.115	-.060	.093
FS_reports_to_users	.602	-.522	.064	.165	.124	-.336	.031	.036	.073	.032
FS_reports_to_governance	.641	-.471	.020	.141	.155	-.395	.082	.068	.043	-.018
FS_reports_to_management	.661	-.397	-.029	.193	.012	-.422	.000	.056	.053	-.029
FS_reports_to_regulators	.734	-.184	-.037	.131	-.198	-.257	.108	.049	-.089	.011
FS_reports_error_free	.574	-.384	-.104	-.024	.157	-.497	.094	.115	.060	.191
FS_assertions_backed	.675	-.410	.125	.032	.066	-.320	.018	.061	-.056	.067
Reports based on ISQC1 standards	.793	-.288	.028	-.188	.092	-.050	-.039	.053	-.035	.060
Reports valued by clients	.587	-.042	-.362	-.053	-.388	.223	-.105	-.042	-.088	.221
Audit_supervised	.790	-.254	-.068	-.152	.028	.261	-.182	.130	.260	.117
Audit_requirements_explained	.803	-.317	-.045	-.086	.007	.292	-.024	.088	.185	-.020
Audit_client_comfortable	.623	-.156	-.182	.045	-.433	.139	-.113	-.066	.103	-.140
Audit_communication_continous	.710	-.229	-.220	-.041	-.125	.292	-.178	-.138	.024	-.179
Audit_client_poor_skills	-.418	.153	.173	.474	.158	.187	.129	.280	.115	-.038
Audit_client_poor_control	-.521	.023	.121	.316	.204	.045	.138	.297	.080	-.269
Audit_client_personnel_unawares	-.547	.153	-.101	.298	.088	.170	.233	.214	.211	.079
Audit_financial_year	.545	-.541	-.038	-.021	.250	.179	.084	-.063	-.163	-.036
Audit_compare_performance	.673	-.521	.074	.004	.007	.128	.052	-.030	-.005	-.154

Audit_predict_scenarios	.655	-.356	.021	.099	-.132	.324	.170	.011	.021	-.001
Auditors express going concern in client report	.610	-.554	.127	.036	-.012	.250	.033	-.098	-.059	-.113
Firm get communication from audit committee	.541	.210	-.070	.264	-.201	-.098	.015	-.034	.348	.021
Firm ranked by audit commitee as a matter of quality concern	.499	.056	-.044	.436	-.270	.048	.320	.221	-.099	.011

Extraction Method: Principal Axis Factoring.

a. 13 factors extracted. 13 iterations required.

The factor loadings show how closely the variables are related to each of the factors extracted. Most of the factors have a moderate relation as they range between 0.300 - 0.700. A few of the factors have a negative relation with the extracted factors.