



MIDLANDS STATE UNIVERSITY
FACULTY OF COMMERCE
DEPARTMENT OF ACCOUNTING



***AN INVESTIGATION ON THE EFFECTIVENESS OF FORENSIC
AUDITING ON THE DETECTION AND PREVENTION OF FRAUDULENT
ACTIVITIES.***

BY

DIANA ELEANOR MULONDA

R166500J

***A DISSERTATION SUBMITTED TO THE FACULTY OF COMMERCE IN
PARTIAL FUFILMENT OF THE REQUIREMENTS OF BACHELOR OF
COMMERCE HONOURS DEGREE IN ACCOUNTING***

GWERU, ZIMBABWE

MAY 2020

CHAPTER 1

INTRODUCTION

1.0 Introduction

Fraud together with its fellow office crimes have remained as powerful weapons draining economies on a global level and Zimbabwe has not been excluded, as indicated by Njanike et al. (2014). Popoola (2014) further indicated that extortion has been going unidentified within the reach of both internal and external auditors along these lines creating a hole to be filled by the forensic auditor. The predominant increment in fraud schemes has initiated the development and growth in demand for forensic services. This study tried to assess the viability of forensic audit as a tool for fraud detection and prevention from the auditor's perspective. The research utilized an audit firm called PKF Chartered Accountants and Business Advisers as its case study. PKF Chartered Accountants specializes in external audits, tax assessment services, forensic audits and

Match Overview

12%

-
-
-
-
-
-
-
-

1	Submitted to Midlands ... Student Paper	7%	>
2	Submitted to De Montf... Student Paper	1%	>
3	Submitted to Fiji Natio... Student Paper	<1%	>
4	Submitted to University... Student Paper	<1%	>
5	Submitted to University... Student Paper	<1%	>
6	Rainer Mautz, Washing... Publication	<1%	>
7	Submitted to New Engl... Student Paper	<1%	>

DECLARATION FORM

I, Diana Eleanor Mulonda hereby declare that this dissertation is my own work and has never been submitted before at this institution or any other University.

Signature.....

Date.....

APPROVAL FORM

The undersigned hereby certify that they have supervised the student Diana Eleanor Mulonda (R166500J) on her dissertation entitled ‘An investigation on the effectiveness of forensic audit as a tool for fraud detection and prevention. A case study of PKF Chartered Accountants, Harare Zimbabwe. The dissertation was submitted in partial fulfillment of the requirements of Bachelor of Commerce in Accounting Honors Degree at Midlands State University.

.....

SUPERVISOR

.....

DATE

.....

CHAIPERSON

.....

DATE

.....

EXTERNAL EXAMINER

.....

DATE

RELEASE FORM

NAME OF STUDENT : DIANA ELEANOR MULONDA

REG NUMBER : RI66500J

**DISSERTATION TITLE : AN INESTIGATION ON THE EFFECTIVENESS OF
FORENSIC AUDIT AS A TOOL FOR FRAUD
DETECTION AND PREVENTION**

**DEGREE TITLE : BACHELOR OF COMMERCE ACCOUNTING
HONOURS DEGREE**

YEAR GRANTED : 2020

Permission is hereby granted to the Midlands state university to produce single copies of this dissertation and lend or sell such copies for scholarly or research purposes only. The author reserves publication rights, neither the dissertation nor extensive extracts from it may be printed or otherwise written without the author's written permission.

.....

SIGNED DATE

DEDICATION

I would like to dedicate this dissertation to my parents, Mr. and Mrs. Mulonda and to my nephews Kupakwashe and Kudiwanashe, may this be a motivation for you to aim higher.

ACKNOWLEDGEMENT

Firstly, I would like to thank my parents for their moral and financial support throughout this research. Secondly, my sincere gratitude goes to my dissertation supervisor, for her dedication towards her work. I would also like to thank Mr. G. Amon for his unwavering support throughout this dissertation. Above all I would like to thank the Lord Almighty for making it possible for me to come this far.

ABSTRACT

There has been a rapid increase in the number of fraud and corruption cases despite statutory audits being carried out. This led to the rise in demand for forensic auditing services and in response audit firms began offering this service. The audit firms however suffer from lack of adequate resources, training, knowledge and practical experience. Taking into consideration the impact of these factors this research sought to investigate the effectiveness of forensic audit as a tool for the detection and prevention of fraudulent activities using PKF Chartered Accountant as a case study. The research utilized a mixed approach whereby quantitative data was gathered from section A of the questionnaire which had closed ended questions quantified using the Likert scale. Qualitative data was gathered from section B of the questionnaire which had open ended questions and 3 interviews were also conducted. A total of 20 questionnaires were distributed using random sampling, 19 were returned and one lost in the process. To analyze the data the multiple regression method was employed and data was presented using bar graphs and tables supported by explanations. The research revealed that there is a positive relationship between training, level of education and ability to detect and prevent fraud. It was also found that litigation support service has a huge role to play in the effectiveness of forensic auditing in detecting and preventing fraud. Recommendations were made towards increase in training sessions as well as engaging in training and development programs to fully equip auditors with knowledge.

Table of Contents

Declaration form	ii
Approval form	iii
Release form	iv
Dedication	v
Acknowledgement	vi
Abstract	vii
List of tables	xi
List of figures	xii
List of appendices	xiii
CHAPTER 1: INTRODUCTION	1
1.0 Introduction	1
1.1 Background of the study	1
1.2 Statement of the problem	4
1.3 Main research questions	4
1.4 Research objectives	4
1.5 Research questions	4
1.6 Delimitation of the study	5
1.7 Limitations of the study	5
1.8 Assumption of the study	5
1.9 Definition of terms	5
1.0 Chapter summary	5
CHAPTER 2: LITERATURE REVIEW	7
2.0 Introduction	7
2.1 To determine circumstances that prompted the need for forensic auditing services	7
2.1.1 Failure of external auditors to detect and prevent fraud.	7
2.1.2 Failure of internal auditors to detect and prevent fraud.	8
2.1.3 Failure of management and those charged with governance to carry out their duties with regards to fraud.	9

2.1.4 Weak or inadequate internal controls	10
2.2 To identify current challenges inhibiting forensic auditors in the detection of fraud	11
2.2.1 Lack of knowledge and training	11
2.2.2 Changes in technology	13
2.2.3 Forensic audit is a new trend in developing countries and is considered expensive	14
2.3 To determine the effectiveness of forensic audit in the detection and prevention of fraud	15
2.3.1 Ability to detect fraud	15
2.3.2 Litigation support services	16
2.3.3 Financial investigations, settlement of disputes and business related issues	17
2.3.4 Forensic audit as compared to external audit	19
2.4 To identify ways of improving forensic audit	20
2.4.1 Training and development programs	20
2.4.2 Use of professionals in forensic engagements	21
2.4.3 Updating existing software	22
2.5 Conclusion	23
CHAPTER 3:	24
3.0 Introduction	24
3.1 Research methodology	24
3.2 Combined approach	24
3.3 Target population	25
3.4 Determining sample size	25
3.5 Sampling technique	26
3.6 Types of information	26
3.6.1 Primary information	26
3.7 Research Instruments	27
3.7.1 Questionnaires	27
3.7.2 Interviews	27
3.8 Ethical presentation	28

3.9 Data validity	28
3.10 Data Reliability	29
3.11 Data presentation and analysis	29
3.11.1 Data presentation	29
3.11.2 Data analysis	30
3.12 Chapter Summary	30
CHAPTER 4: DATA PRESENTATION AND ANALYSIS	31
4.0 Introduction	31
4.1 Questionnaire response	31
4.2 Results and findings	32
4.2.1 Which of the following prompted the need for forensic audit services?	32
4.2.2 Is forensic audit an effective tool in the detection of fraud?	38
4.2.3 Which of the following factors influence the effectiveness of forensic audit	43
4.2.4 Is there a significant difference between an external and a forensic auditor?	49
4.3 Chapter Summary	51
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS	52
5.0 Introduction	52
5.1 Chapter summaries	52
5.2 Major research findings	54
5.2.1 Factors influencing the effectiveness of forensic auditing	54
5.2.2 Differences between external and forensic auditors	54
5.2.3 The effectiveness of forensic auditing as a fraud detection tool.	54
5.3 Recommendations.	54
5.4 Areas for further studies.	55
5.5 Chapter summary.	55
REFERENCE LIST.	56

LIST OF TABLES

Table	Title	Page No.
1.1	PKF Clientele base	2
3.1	PKF Target population	25
4.1	Questionnaire response rate	31
4.2	Response on differences between external and forensic auditors.	49
4.3	Data analysis using multiple regression model	50

LIST OF FIGURES

Figure	Description	Page No
4.1	Response on failure of external auditors to detect fraud	32
4.2	Response on failure of internal auditors to detect fraud	34
4.3	Response on weak or inadequate internal controls	36
4.4	Response on failure of management and those charged with governance to carry out their duties with regards to fraud.	37
4.5	Response on ability to detect fraud	39
4.6	Response on ability to provide evidence	40
4.7	Response on ability to carry out financial investigations and solve disputes	42
4.8	Response on impact of training	43
4.9	Response on impact of the availability of resources	45
4.10	Response on impact of knowledge and level of education	46
4.11	Response on practical experience	47

LIST OF APPENDICES

Appendix	Description	Page
1	Requesting letter	66
2	Questionnaire	67
3	Interview guide	69
4	Regression analysis data	70

CHAPTER 1

INTRODUCTION

1.0 Introduction

Fraud together with its fellow office crimes have remained as powerful weapons draining economies on a global level and Zimbabwe has not been excluded, as indicated by Njanike et al. (2014). Popoola (2014) further indicated that extortion has been going unidentified within the reach of both internal and external auditors along these lines creating a hole to be filled by the forensic auditor. The predominant increment in fraud schemes has initiated the development and growth in demand for forensic services. This study tried to assess the viability of forensic audit as a tool for fraud detection and prevention from the auditor's perspective. The research utilized an audit firm called PKF Chartered Accountants and Business Advisers as its case study. PKF Chartered Accountants specializes in external audits, tax assessment services, forensic audits and accountancy consultancy administrations.

1.1 Background of the study

According to Mugombedzi and Gunduza (2016), Okoye and Gbegi (2014), Mukoro et al. (2014), Aborbie (2015) and Bassey (2018) the utilization of forensic accountancy fundamentally dissuades extortion both in the private and public sector as it is the forensic auditor's responsibility to avail credibility and independence to a fraudulent activities investigation. Okoli and Taiwo (2014), Onodi et al. (2015), Nunn et al. (2016), Enofe et al. (2016) and Popoola (2014) proceed to make reference to the fact that forensic auditors can recognize fraudulent activities better than traditional auditors whilst Nwanko (2014), Alabdulla et al. (2014) and Eliezer and Emmanuel (2015), showed that both forensic and external auditors are of paramount importance as they both play a reviewing control of financial information with a goal of identifying extortion. Moreover Rohana et al. (2015) added that forensic services, operational reviews, enhanced audit committees, upgraded internal controls are amongst the highly rated devices for forestalling fraud in the public sector. However Enofe et al. (2014) and Ajomele (2015) differ on the adequacy of forensic audit in detecting fraud by uncovering its inability to detect fraud in the Nigerian administrations and stated that this has strong ramifications on comprehensive corporate administration. This view was upheld by Onodi et al. (2015) who

accepted that the inadequacy is as a result of failure to get statutory support in Nigeria. In agreement Huber (2017) posited that the idea of the legitimate framework in the US has made forensic audit not so useful in fraud identification. Nevertheless these conclusions concentrated on the effect of legal support, nature of lawful frameworks on identification of extortion and furthermore differentiate external auditors and forensic auditors whilst disregarding the effects of experience, training and insufficient resources as showed in passing by Njanike et al. (2014) who referenced that the forensic audit staff are victims of lack of these factors. Mulling over the effect of experience, resource and training on the ability of forensic auditors to detect fraud, this study sought to research on the effectiveness of forensic audit as a tool for fraud detection and prevention.

Table 1.1: PKF Clientele base.

Year	External Audit	Taxation	Accountancy	Forensic Audit	Total
2017	72	17	6	1	96
2018	80	17	16	-	113
2019	74	20	19	1	114

Source: PKF Clientele base records (2017-2019)

Table 1.1 above shows the percentage dominated by each service offered by PKF Chartered Accountants on the clientele base. The firm specializes more in external audit as shown in Table 1.1 above. The external audit clientele base increased from 72 clients in 2017 to 80 clients in 2018 registering a 70, 8% clientele base in 2018. According to the Annual Progress Report (2018) the increase was as a result of the company accepting new engagements however the Annual Progress Report (2019) indicated that the decrease in the external audit clientele base from 80 clients to 74 clients in 2019 was as a result of having invested so much time and external audit personnel in the forensic audit engagement accepted in 2019 such that the external audit department was understaffed and unable to meet deadlines for the other clients. Engaging external auditors in a forensic audit is a problem according to Okoye and Gbegi (2014) who are of the notion that there is a critical distinction between external examiners and forensic examiners as external auditors do not or may not have sufficient training to handle fraudulent activities such as security frauds and embezzlement.

There have been fluctuations in the clientele base of the forensic audit department as shown in Table 1.1 above. The year 2017 had 1 forensic audit client representing 1.04% of the clientele base, this was followed by a 1.04% decrease in 2018 as the firm did not carry out any forensic audit engagements. According to the Annual Progress Report (2018) this was because the firm turned down a number of forensic audit engagement requests as they were complex and could possibly strain the firm's resources as it had no adequate resources to carry out the audit. The year 2019 was followed by a 0.88% increase in the forensic audit clientele base and this according to the Annual Progress Report (2019) the forensic audit was successful in detecting fraud however it strained the firm's resources and recommendations were made seeking to establish a fully functional forensic audit department specifically for forensic audits in the years to follow. Njanike et al. (2014) uncovered that majority of the forensic audit personnel are victims of numerous difficulties among them being insufficiency of material resources, specialized expertise and hazy acknowledgement of the profession.

According to the PKF Annual Progress Report (2017) the forensic audit carried out in 2017 was the firm's very first forensic audit client, whilst 2018 had no forensic audit client and 2019 had only one client. The trend in forensic audit department shows that the firm has not had much exposure in the forensic field as it has only executed 2 forensic audits in a space of 3 years, this was supported by the PKF Annual Progress Report (2019) which indicated that the firm ought to establish a fully functional forensic audit department and also fairly allocate training sessions to all four departments of the firm regardless of what percentage it constitutes on the clientele base. However complaints from the staff engaged in the forensic audit indicated that they took more time than expected due to lack of practical business experience and lack of training in the forensic field, Staff Reports (2019). According to Nunn et al. (2017) the foremost important skill is practical experience gained through ripening in the profession and also the experience of working on very challenging fraud cases in law enforcement for several years offers invaluable knowledge.

PKF Training Logbook (2017) indicated that training sessions were to be held every Friday and out of the 52 Fridays in 2017 only 27 training sessions were held and all of them were on external auditing resulting in only 52% training sessions held. According to PKF Training Logbook (2018) there was 48% increase in the number of training sessions held from the 40 sessions in 2018 to the 49 sessions in 2019, 3 days which were excused because of public

holidays. However 37 of these sessions were on external audit, 5 on taxation and 7 on grooming and deportment and none on forensic audit. According to Asare et al. (2015) training seemed to carry a critical role in restricting forensic auditors from identifying and preventing fraud. This view was supported by Okoye and Gbegi (2014) who posited that training and guidance is indispensable in maintaining potent strategies for the identification and prevention of extortion and corruption and the firm's reputation. Taking into account the impact of practical experience, training and resources, this research seeks to evaluate the effectiveness of forensic audit in fraud detection.

1.2 Statement of the problem

As indicated by Popoola (2014) there is the existence of an expectation gap between the actual standard performance of the auditors and performance that is expected by the public and this hole can be filled by presenting a forensic auditor. PKF Chartered Accountants does not have a fully functional forensic audit division and has been depending on external auditors to execute forensic audit assignments. Nevertheless, it is forensic audit that identifies fraudulent activities, however Njanike et al. (2014) uncovered that most forensic audit divisions suffer the effects of lack of resources, information, skill and training. It is the impacts of resources, knowledge and training and differences between the external auditor and the forensic auditor that this research tries to explore the viability of forensic audit as a technique for fraud detection and prevention.

1.3 Main Research Question

Is forensic audit an effective tool in detecting fraudulent activities?

1.4 Research Objectives

- To determine the effectiveness of forensic audit as a tool for fraud detection and prevention.
- To identify circumstances that prompted the need for forensic audit services.
- To identify current challenges inhibiting forensic auditors from detecting fraud.
- To identify ways of improving forensic audit services so as to better detect fraud.

1.5 Research Questions

- Is forensic audit an effective tool for the detection of fraudulent activities?
- Which circumstances prompted the need for forensic audit services in the detection of fraud?
- What challenges are currently inhibiting forensic auditors from detecting fraud?
- How can forensic audit be improved so as to effectively detect fraud?

1.6 Delimitations of the study

The study made efforts to investigate how effective forensic audit is in the detection of fraud and is centered on the audit engagements at PKF Chartered Accountants Harare in Zimbabwe. The period under scrutiny is 3 years ranging from the year 2017 to 2019. The study covered a population of 23 members of the external audit department both trainee auditors and certified auditors.

1.7 Limitations of the study

The company being an audit firm was too sensitive when it comes to its information as it had a confidentiality clause and this made it difficult for the interview respondents to freely express their views posing a threat on the results of the study. The CEO's signature was required and he was barely in office and had no fixed date as to when he will be available. This slowed down the progress of the research and made it difficult to follow up on one of the questionnaires that was missing as the researcher had deadlines to meet.

1.8 Assumptions of the study

The researcher assumed that the information given was accurate so as to enhance reliability of the information gathered. Responses given fairly represented all auditors therefore information gathered was relevant.

1.9 Definition of terms

- Forensic audit – According to Enofe et al. (2015) Forensic auditing is the claim to fame area of the accounting profession which depicts commitment that come from real or foreseen debates or litigation.
- Fraud – According to Enofe et al. (2015) no definite and constant guideline can be set down as a general suggestion in characterizing fraud as it incorporates shock, stunt, unfair and out of line ways by which another is cheated. They proceeded to make reference to the fact that it is a legal term that alludes to the purposeful deception of reality so as to control or hoodwink an organization or person.

1.10 Chapter Summary

This chapter focused on the background of forensic audit as a device for identifying fraudulent activities and the main research questions that triggered the researcher to carry out this research. The main focus was on the effectiveness of forensic audit as a tool for fraud detection and

prevention of extortion and also on factors making it difficult for the auditors to identify such activities. The case study used was PKF Chartered Accountants and Business Advisors.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In this chapter, the researcher presents the hypothetical establishment of the study by giving significant literature relating to the viability of forensic review as a device for the identification of extortion. Literature that initiated the establishment of objectives will be inspected, with diverse concepts emerging at that point and being utilized to build the research model.

2.1 To determine circumstances that prompted the need for forensic auditing services.

2.1.1 Failure of external auditors to detect fraud.

According to Ng'ang'a (2015), reputation of the external auditing process has been raising questions in numerous nations because of the number of money related scandals and mega-fraud which prompted the downfall of many big organizations. This view was supported by Enofe et al. (2015), Aborbie (2015) and Okoye and Gbegi (2014) who highlighted that the widespread of fraud in present day associations has made traditional auditing impotent and insufficient in the detection of fraud. Aborbie (2015) proceeded to express that it is as a result of the complexities of the types of fraud being committed nowadays that internal and external auditors cannot keep up. Also Njanike et al. (2014) revealed that KPMG carried out two successive external audits and failed to identify extortion which was thereafter revealed by forensic audit. Ng'ang'a (2015) placed that deceitful exercises have been in the financial reports for a considerable length of time regardless of statutory audits. Eliezer and Emmanuel (2015) concur as they are of the idea that external auditors are hesitant to report fraud committed by management therefore impeding their independence.

In addition Nunn (2017) posited that when there is alleged extortion, it is critical to draw in independent forensic auditors as the present auditors may experience inherent clashes. Dada (2014) and Basse (2018) contends that fraud makes unreasonable allowances for auditors if they suspect that they will be penalized for a considerable length of time that the fraud went undetected, it is such cases that entice auditors to come together with the executives for purposes of hiding fraud. Ajomele (2015) revealed that a larger part of the Chartered Accountants and University lecturers of accountants are of the view that accountants do not have the ability to

carry out forensic auditing. Furthermore, Popoola (2014) demonstrated that outsiders anticipate that an external auditor should recognize fraud while the auditor is hesitant to as he trusts it is not his essential obligation to do so, in this manner creating an expectation gap. This view was upheld by Okoli and Taiwo (2014), Onodi et al. (2015), Ijeoma (2014), Mutua (2014) and Odelabu (2014) highlighted that this made a requirement for an increasingly robust strategy to stem the tide of misrepresentation and consequently connect the audit expectation gap.

On the other hand Nwanko (2014) proclaims that poor internal controls bring about fraud and this can be forestalled by permitting the internal and external audit staff to do intermittent appraisals. Internal and external auditing, or oversight by independent accounting experts of the organization's records and reports is a significant way of dealing with fraud reduction according to Wells (2014). Nwanko (2014), Alabdulla et al. (2014) and Eliezer and Emmanuel (2015) who are of the view that external auditors are similarly as significant as forensic auditors as the two of them play a review control of the financial information with the aim of spotting fraud. Asare et al. (2015) recognizing fraud is the obligation of external auditors and with a couple of exceptions they should discover it. This was bolstered by Biddix (2015) who asserted that external auditors have a key task to carry out in fraud recognition. It is a direct result of these clashing ends that this research sought to clarify the difference between the external and forensic auditors by investigating the effectiveness of forensic audit in the detection of fraud.

2.1.2 Failure of internal auditors to detect fraud

As indicated by Ng'ang'a (2015), Onodi et al. (2015), Popoola (2014) fraudulent activities have been in the financial reports for a considerable length of time regardless of external and internal audits. Aborbie (2015) and Eliezer and Emmanuel (2015) proceed to state that this insufficiency radiates from the complexities of advanced fraud making it hard for internal auditors to keep up. In addition Enofe et al. (2015), Jose (2014) and Okoye and Gbegi (2014) are of the idea that it is because of the disappointment caused by internal and external auditors in the detection of fraud that has brought forth forensic audit. Furthermore, Yego (2016) and Wells (2014) asserted that poor internal controls bring about misrepresentation and this can be forestalled by permitting the internal and external auditing personnel to exercise periodic assessments. As indicated by Dozier (2015) internal auditors must have adequate knowledge on fraud to enable them to ascertain fraudulent exercises. Haniffa and Hudaib (2014) uncovered that bank administrators and workers discovered loopholes to conduct fraud and later concealed their tracks using internal auditors. In

addition Biddox (2015) and Oyedokun (2015) uncovered that numerous fraud found by internal auditors were immediately excused as the management have significant control over the internal auditors' ability to identify misrepresentation. This view was upheld by Akenbor (2014), Lanza (2014) and Rahman (2014) who brought up that by constraining the extent of the internal audits management can successfully cover up fraud. Moreover, Haniffa and Hudaib (2014) set that fraud, in whatever nature and appearance must be recognized first, since detection is a significant essential of uncovering any kind of extortion. All alone, auditors are not really the most qualified group to perform the task of fraud detection.

On the other hand Omar and Bakar (2014), Matsika (2017) and Lin (2014) demonstrated that internal auditors assume a significant role in the detection and anticipation of fraud. While other researchers, such as, Iyer and Samoc (2016) and Soltani (2014) accept that internal audit is a potent detection and anticipation instrument others trust it is a result of its disappointment that forensic audit was established, this study accordingly tried to explore the effectiveness of forensic audit as a fraud detection and prevention device.

2.1.3 Weak or absence of adequate internal controls

According to Kabue (2015) and Macdonald (2015) increasing cases of fraud have pulled in interests from the public and many individuals accept that fraud would have been kept away if organizations maintained adequate internal controls. This view was supported by Onodi et al. (2015) who is of the idea that some conspicuous indications of fraud are because of rehashed slips by internal controls. Also, Akelola (2015) and Lokanan (2015) concur that chance to commit fraud ought to be connected with insufficient or feeble internal controls. According to Asare et al. (2015) and Asare and Wright (2014) as a result, it is the obligation of the management to create solid internal controls that will help in identification and avoidance of fraud. This was upheld by Njakarimi and Karwirwa (2015), Dozier (2015), Yego (2016), Haniffa and Hudaib (2014) who highlighted that solid internal control permit institutions to recognize issues that may cause problems through fraud hence avoiding deceitful exercises.

Abdulla and Mansor (2015) and Fazli et al. (2015) pointed out that one of the conditions vital for fraud to happen is seen opportunity made by impotent controls, and poor administration framework, in accounting this is known as weak internal controls. As indicated by Oyekodum (2015) the absence of internal controls does not block fraud from occurring, nonetheless it leaves

an open entry for it to occur. Ng'ang'a (2015) and Osunwole (2015) indicated that when top management does not assume a functioning role in misrepresentation, preventing internal controls may not be the best answer for fraud prevention henceforth the requirement for forensic audit. DiNapoli (2016), Rohana et al. (2015) and Omar and Bakar (2014) concur that survey of internal controls and external audits on the financial statements are positioned as the top fraud prevention instruments. According to Muthusamy (2016) eliminating chances of fraud should be possible by introducing a decent arrangement of internal controls, with physical control of resources, appropriate approvals, isolation of obligations and legitimate documentation.

Michael Comer (2017) reckons that it is not really the shortcoming of internal controls that causes extortion but instead inability to detect and distinguish signs that things are not exactly right. Detection of fraud starts with the signs of warnings which show that something is not right as indicated by McWilliams (2016). According to Macdonald (2015) to re-establish the badly required reputation, a few organizations made the move to improve foundation of the internal control and accounting frameworks drastically. While different researchers accept sound internal controls are the remedy to extortion others accept fraud can even occur within the sight of sound internal controls hence the requirement for forensic services.

2.1.4 Failure of management and those charged with governance

As indicated by Ng'ang'a (2015) poor corporate administrations and book keeping disappointments have been cited as the catalyst of the plans for extortion. Akelola (2014) and Adorbie (2015) posited that the essential obligation regarding the anticipation and detection of fraud and mistakes rests with management and those charged with governance. This view was supported by Nwanko (2014), Lin (2014) and Onodi et al. (2015) who revealed that the obligation of forestalling, distinguishing and investigating fraud in fiscal reports lies in the hands of management yet additionally in the hands of other control institutions and systems. Besides Peter et al. (2014) and Macdonald (2015) proceed to specify that fraud by the administration is a point that has raised public concern. This view was upheld by Abdulla and Mansor (2015) one could choose to enhance himself through one's occupation or obligation in an organization and this misuse of power by fraud perpetrators incorporates cautious mismanagement. In understanding Yego (2016) uncovered that Nigerian researches from 2011 to 2014 revealed that most successive culprits were top management. Asare et al. (2015) and Asare and Wright (2014) argued that auditors should concentrate on how management might execute and disguise

misrepresentation. This view was bolstered by Gregory (2015) and Iyer and Samoc (2016) who recommended that it is hence significant that professional standards that are linked to fraud detection reinforce the accentuation on the management conduct that might be related with unscrupulous conduct. Enofe et al. (2015) it is very workable for top level management to get to information and change the data, paper-based framework or a computerized system. Everything relates back to human instinct and the top level management. Interestingly Michael Comer (2017) showed that fraud is not the top goal of the bustling management until it strikes and it is this reluctance that makes it simpler for fraudsters to succeed.

Mohd and Muhammad (2014) posited that monetary fraud cannot happen except if the chance is available, this opportunity radiates from the employee's capacity to acknowledge shortcomings in the governance framework and exploit them. As indicated by Biddix (2015) and Oyedokun (2015) fraud can be found by internal auditors however the board has critical effect on internal auditor's commitment to fraud detection. This was supported by Akenbor (2014), Haron et al. (2014) and Rahman (2014) who are of the view that by restricting the scope of the audit or accessibility of resources the board can adequately cover extortion. In understanding Soltani (2014) is of the view that a few auditors do not unveil fraud because of fear of opposing the management.

On the other hand DiNapoli (2016), Rohana et al. (2015) and Omar and Barkar (2014) concur that examination of internal controls by the board and external auditors on the financial reports are positioned as the top most fraud thwarting instruments. As indicated by Osunwole (2015) the duty of internal controls rests with the management and in response management looked for forensic auditors to safeguard internal controls. Adeidre (2016) expressed that absence of the management's accountability has caused people in general to understand that there is an incredible requirement for experts known as forensic auditors that can detect, uncover and forestall shortcomings in the governance system, internal controls and financial statements. This research hence investigated the adequacy of the forensic audit as a technique for fraud detection.

2.2 To identify current challenges inhibiting forensic auditors in the detection and prevention of fraudulent activities.

2.2.1 Lack of knowledge and training

As indicated by Okoli and Taiwo (2014) forensic audit is not popular in developing economies consequently accountants with satisfactory specialized ability are not really accessible and a

dominant part of accountants carrying out forensic audits are external auditors. Asare et al. (2015) and Asare and Wright (2014) proceed to mention that forensic audit has not been adequately incorporated in the curriculum prompting lack of knowledge in the forensic field. This was supported by Ajomele (2015) who revealed that most Chartered Accountants and University lecturers are of the view that accountants do not have the ability to carry out forensic auditing as the university degrees offered in developing countries do not focus much in forensics. As indicated by Dada (2014) a professor cannot pass on to the student what he does not have knowledge of accordingly forensic audit has not been successfully incorporated in the educational program. This was supported by Magali and Qiong (2014) who referenced that auditors are not fully equipped with knowledge to detect or prevent fraud. According to Zhaol et al. (2014) Oyedokun (2015) and Lawal (2017) specialists noticed that auditors' in developing economies require training in fraud recognition and detection strategies or fraud investigating methods. Dada (2014) concurred that auditors are not trained enough to allow them to identify or perceive fraud. Iyer and Samoc (2016) and Soltani (2014) noticed that reality trends proposing that fraud exists are new to numerous auditors since they have not been trained in the discipline of forensics because fraud is an uncommon issue.

Auditors may need more training in fraud identification strategies or fraud investigation methods according to Sikka (2015), in this regard Gill (2017) infer that audit seniors exposed to a fraud case evaluate fraud with high risk however for the most part neglect to structure compelling tests to detect the extortion. In addition, Bosse and Phillips (2016) posited that the individuals who can recognize fraud are progressively capable of coming up with audit tests to identify whether fraud is present. According to Asare et al. (2015) the audit procedure, knowledge, experience, training and auditor allowances seem to play a huge and moderately equivalent role in hindering auditors from detecting fraud. This was supported by Njanike et al. (2014) who uncovered that most forensic audit departments experience adverse effects of resource shortages, information, skill and training. Gregory (2015) asserted that the outcomes of auditors' obvious absence of adequate fraud knowledge bring up issues about the educational system and training. Specifically, it gives avocation to presenting forensic accounting courses in the university educational program and additionally in practice. Asare and Wright (2014) highlighted that audit studies and practice can concentrate on creating promising mediations, for example, improved training for auditors and closer joint effort with fraud analysts and changes in the correspondence

of the firm and allowance system of the firm. According to Adeidre (2016) other researches such as those by Nunn (2017), Popoola (2014), Aborbie (2015) and Okoye and Gbegi (2014) have proposed the significance of auditors' training to reason deliberately so as to upgrade fraud identification and detection abilities. Taking into consideration the effects of knowledge and training, this study evaluated the effectiveness of forensic audit in fraud detection.

2.2.2 Changes in technology

According to Jose (2014), Macdonald (2015) and Gupta (2018) the forensic audit workforce experiences absence of specialized abilities and inability to accumulate data that is permissible in court. Okoli and Taiwo (2014) mentioned that a decent forensic auditor is supposed to have a strong foundation of computer knowledge and Information Technology. In the modern world, technology is changing continually and the forensic workforce needs to keep performing highly as indicated by Manas (2014). Moreover, Mau (2015) and Petrascu and Tieanu (2014) indicated that most lawbreakers responsible for fraud utilize advanced innovation and accounting methods to carry out complex extortion and this implies forensic auditors' need to stay aware of complexities. This view was supported by Dezoort and Harrison (2018), Zechariah et al. (2014) and Nipion (2015) who revealed that exponential increment in the use of Information and Computer Technology represent a test to the profession of forensic auditors as the techniques utilized by crooks and fraudsters keep on updating. This was upheld by Dada (2014) and Abdulla and Mansor (2015) who highlighted that as more improvement both in the Information Communication Technology (ICT) world and other fields is initiated, fraudsters keep on preparing strategies towards fraud practice. Peter et al. (2014) goes on to say this requires forensic auditors with great experience and ICT abilities to anticipate and detect such fraudsters.

According to DiNapoli (2016), Ajomele (2015) and Aborbie (2015) forensic auditing does not use a sample and accordingly enormous volume of information is required for analysis and is typically done using computers and of lack of capacity to stay aware of Information Technology cannot be tolerated as it leads to challenges in the event that one is to execute forensic audit. This view was upheld by Asare et al. (2015), Asare and Wright (2014) and Jonathan and Osasumwen (2014) who showed that the utilization of computers to carry out an audit as a strategy require a specific aptitude that not all auditors have. However, Akelola (2015) clarified that Information Technology is an overall internal and external factor that impacts fraud and can be utilized in forestalling and detecting extortion nevertheless it is exceptionally prone to ineffectiveness and

most likely inefficient if not executed appropriately. In this case, PKF does not have a fully functional forensic audit department and auditors from the external audit department carry out its forensic audits. This study evaluated the effectiveness of forensic audit as a tool for fraud detection and prevention.

2.2.3 Forensic audit is a new trend in developing countries and is considered expensive

As indicated by Jose (2014) and Okoli and Taiwo (2014) forensic audit is just emerging in developing countries hence the existence of a shortage in forensic auditors. This was supported by Eliezer and Emmanuel (2015), Lokanan (2015), Agrawal and Cooper (2017) who demonstrated that accountants with specialized skill on the forensics issue are not really accessible in developing nations. In addition Sikka (2015) and Huber (2017) proceed to state that an educator cannot train what he does not know and it is because of this reason that forensic audit has not been adequately incorporated in the curriculums. On the other hand taking into account the cost benefit analysis Gill (2017) posited that forensic audit is costly and can only be done by financially stable organizations. This was upheld by Morales et al. (2014) and Seitz et al. (2015) who added that most associations think that it is simpler to drop the case than draw in a costly forensic auditor to recuperate a small amount of money. Abdulla and Mansor (2015), Idowu et al. (2016) and Akelola (2014) indicated that by the time the fraud is identified, the amount is useless or the odds of recouping it will be smaller by then in this way it could be a misuse of money to hire a forensic auditor.

In addition Asare et al. (2015) and Asare and Wright (2014) posited that most companies are afraid of bad reputation and expenses so they prefer to settle their issues outside court. Moreover, Adeidre (2016), Odunayo (2014) and Agbaje and Adeboye (2014) contended that there is no compelling reason to depend on the services of forensic auditors in detecting fraud since external auditors are well prepared in all situations to identify a wide range of fraud while carrying out their statutory audit at the same time it is actually cost effective. Seitz (2015) posited that avoiding fraud is less expensive than the expense of identifying it hence the need to use forensic audit in counteraction of misrepresentation which may potentially control fraudulent activities. This research consequently analyzed the viability of forensic audit in the detection and prevention of fraud.

2.3 To determine the effectiveness of forensic audit as a tool for fraud detection and prevention.

2.3.1 Ability to detect fraud

As indicated by Eliezer and Emmanuel (2015) and Oyedokun (2016) disappointment caused by external auditors as a result of their failure to recognize and prevent deceitful activities has cleared paths for an expansion in fraudulent activities bringing about the requirement for forensic auditors to control such exercises. This view was supported by Muriithi et al (2016) Petrascu and Tieanu (2014) and Mohd and Muhammad (2014) who are of the view that the significance of forensic audit can be lucidly comprehended from the context of failure of external auditors. According to Enofe et al. (2014), Ali (2017) and Ekiti (2017) the task of the forensic auditors is to identify extortion happening in the organizations every year as well as the culprit responsible. This according to Zechariah (2014) and Ibrahim et al. (2014) incorporate following tax evasion and fraud exercises such as tax avoidance.

As indicated by Eliezer and Emmanuel (2015) with the utilization of analytical and innovative skills, a forensic auditor can without much of a stretch detect budgetary misrepresentation executed by the management therefore avoiding corporate disappointment. Besides Muriithi et al. (2016) and Magali and Qiong (2014) uncovered that a forensic accountant is capable of identifying and blocking business extortion using Benford law. Zhaol et al. (2014) revealed that a forensic accounting group managed to reveal fraud plot for their client in Kogi State after the external auditor had not managed to do as such in their statutory audit. However Albrecht, (2015) contended that fraud is once in a while observed as the misrepresentation defaulters are getting more intelligent because of the potential slip-ups humans can cause, making it hard for even forensic audit to detect fraud. This has made identification and detecting fraud a difficult work for a forensic accountant. In addition, Okafor and Onyali (2015) and Ajomele (2015) inspected the adequacy of forensic auditing departments in the Nigerian stock trade and showed its inadequacy as it has inadequate expertise and resources resulting in fraudulent exercises being done consistently. Adeidre (2016), Odunayo (2014) and Agbaje and Adeboye (2014) argued that there is no compelling reason to depend on the administrations of forensic accountants in detecting fraud since external auditors are well prepared in all situations to identify a whole range of fraud while carrying out their statutory reviews and at the same time cost effective.

2.3.2 Litigation support services

Oyedokun (2016) presents that litigation support gives help of a bookkeeping nature in an issue including existing or pending cases. According to Ezejiofor et al. (2016) and Sang (2014) traditional auditing and forensic auditing are similar however they are not the same since the latter includes litigation support which is not present in external auditing. Enofe et al. (2014) submits that forensic accountants have assumed an undeniably significant job in litigation and other legal debates incited by failures and frauds. According to Abdinasir (2017), Akelola (2015) and Vukadinoc et al. (2015) forensic accounting is focused on the utilization of accounting discipline to help unearth facts in business litigation. Mau (2015) and Igbaekemen et al. (2014) present that forensic accounting is for the most part appropriate for lawful assessment offering the most significant level of affirmation including fresh generally acknowledged meanings of presenting the discoveries in settling conflicts.

Nwako (2014), Onodi et al. (2015) and Nyakarimi and Karwira (2015) showed that unlike external auditors forensic accountants' exhibition includes a detailed evaluation to reveal conceivable fraud that is appropriate for presentation in an official courtroom as proof. Igbaekemen et al. (2014) explain that forensic accountants are portrayed as the fraud battling experts as they have auditing abilities, accounting and analytical knowledge to aid legal issues whilst external auditors just possess inspecting abilities. This was supported by Asare et al. (2015) and Asare and Wright (2014) who asserted that those fraud experts' discernment towards the auditor's ability to identify extortion are helpful in a significant setting known as auditor litigation and depend on proof they collect that is both important and hard to get. Gbegi and Adebisi (2014) proceeded to state that forensic accountants assume a significant job as they give a prosecution or litigation support service that manages issues of financial harms as a method for covering setbacks of an external auditor in order to bring back trust of all stakeholders since external auditors do not have such skills.

Additionally Eyisi and Ezuwore (2014) showed that fraud analysts who are associated with auditor litigation regularly examine audit working papers, think about auditors' motivating forces and are saturated with auditing benchmarks to permit them to decide the reason for any failure of an audit. Enofe et al (2015) fraud auditors have and can give significant bits of knowledge into why evaluators neglect to identify extortion due to their aggregate encounters in examining genuine fraud cases particularly those where failure of an audit is asserted and the forensic audit

centers around those sections so making them progressively appropriate for arrangement of litigation services. Moreover Olola (2016) revealed that fraud analysts who affirm as master observers or work on litigation cases in regards to failure of an audit assume a noteworthy job in helping the trier of the case to decide the punishments and outcomes inferable from auditors when an audit neglects to identify material extortion. Rather (2014) posited that forensic accounting has existed for a considerable length of time and has developed as a key component in case support services in ascertaining monetary misfortunes coming about because of agreement breaches since external auditors do not have such aptitudes. According to Aduwo (2016) encounters with respect to the reasons for auditor's inability to recognize and detect fraud is significant, through a moderately unexplored, wellspring of data for the auditing profession to upgrade its commitment to society. Likewise Akwasi et al, (2014) posited that managers might be reluctant to order explicit forensic services to look for fraud, maybe out of worries that such explicitness may trigger litigation for instance, it took the court's mediation for the affirmation of receivables to be required in many audit engagements. Magali et al. (2014) a specialist noticed that laws shield auditors from genuine litigation.

However Bassey (2018) and Dada (2014) argued that laws make unreasonable allowances for auditors if they realize that they might be punished for detecting fraud by being held responsible for the time that the fraud went undetected. In these circumstances auditors might be enticed to connive with the board in covering fraud. On the other hand Adeidre (2016), Odunayo (2014) and Agbaje (2017) contended that there is no compelling reason to depend on the administrations of forensic accountants in locating fraud since external auditors are well prepared in all situations to recognize a wide range of fraud while performing their statutory audit which is cost effective simultaneously. This research therefore tried to examine the effectiveness of forensic audit in detecting and preventing fraud.

2.3.3 Financial investigation, settlement of disputes and business related issues

As indicated by Olaoye and Dada (2014) the developing multifaceted nature of the present business condition and the developing number of investigations in the business world has realized the inquiry that proficient forensic auditors are to become an integral factor in financial auditing and business related issues. This was supported by Okafor and Agbiogwu (2016) and Ibrahim et al. (2014) who highlighted that forensic auditors assume a significant job in financial related examinations and business related issues since external auditors are neglecting to

highlight budgetary violations in their statutory reviews. According to Eliezer and Emmanuel (2015) external auditing which is part of traditional bookkeeping has to do with scrutinizing the numerical accuracy in the accounting division while forensic auditing looks past the monetary numbers to perceive what is not exactly right.

Muriithi et al. (2016), Ramadhan (2015), Okoye and Gbegi and Oyekodun (2016) showed that the external auditors simply express their feelings on the fiscal reports of the association adhering to set down principles, approaches and guidelines. Stan and Abdulla (2015) and Oduyoye (2015) proceed to attest that such assessments are not founded on proof that could be utilized in the courtroom as proof. Conversely Enofe et al. (2015) and Mans (2014) are of the view that forensic accounting grapples on assurance of proof that could be utilized in the courtroom as proof and not simply conclusions. Mau (2015) and Igbaekem et al. (2014) showed that forensic accounting is for the most part appropriate for lawful review offering the most elevated level of confirmation including new generally acknowledged meanings presented in a logical manner of providing the results in settling disputes. Nwako (2014) highlighted that unlike external auditors, forensic accountants' presentation includes a well detailed investigation to reveal conceivable extortion that is appropriate for representation in an official courtroom as proof. Igbaekemen (2014) clarify that forensic accountants are portrayed as the extortion battling aces as they have bookkeeping abilities, evaluating aptitudes and analytical abilities to aid lawful issues whilst external auditors just possess auditing aptitudes.

With regards to dispute resolution Sukamal (2014) posited that forensic accountants assume an essential job in evaluating the harms experienced by parties included and help in settling those disputes before it could get to the official courtroom. This was supported by Zhaol et al. (2014) who proceeds to state that forensic accounting searches for settlement out of court and makes a few proposals or moves that can be made to decrease future dangers and misfortunes. In addition Buhari (2016) uncovered that forensic accounting can therefore be viewed as master in the field of accounting because of the way that they offer best types of assistance in legitimate survey and furthermore they offer the most significant level of confirmation that the proof they give is sufficiently adequate to be utilized in a courtroom. Oyedokun (2017) showed that forensic audit could be utilized to turn around all the spillages that cause corporate failures. However Zhaol et al. (2014) contended that forensic audit does not help in detecting and forestalling extortion as a particular forensic audit team could not reveal enormous fraud plans and the proof they gave was

not satisfactory to be introduced in a courtroom bringing about the inability to settle interior cases. This study consequently dissected the effectiveness of forensic audit in the prevention and detection of fraudulent activities.

2.3.4. Forensic audit as compared to external audit.

According to McWilliams (2016) and Gupta (2014) the significance of forensic accounting can be plainly comprehended from the setting of failure of external reviews to identify and prevent extortion. This has in this manner made the need to comprehend what makes the external auditor and the forensic auditor different. According to Pany (2014) the forensic auditor applies solid standards and strategies to adequate facts or information and requires ability and aptitudes in their audits whilst on the other hand there is no such need in the traditional space. Taylor et al. (2014), Mau (2015) and Nunn (2017) stated that forensic auditors and external auditors share a few objectives however they have different knowledge, main objectives and skills. In addition Augustine and Uagbale- Ekatah (2014) go on to mention that traditional auditing places emphasis on identifying errors while forensic audit includes identification of fraud.

Uwalomwa et al. (2016) and Ali (2017) posited that the principles of forensic auditing develop from official courtrooms whilst those of traditional accounting like financial related scrutiny are set by the Security Exchange Commission. Alao (2016) revealed that traditional auditing utilizes strategies of inspection known as sampling to find unexpected blunders brought about by shortcomings in internal controls which happen at regular intervals while forensic auditing does not utilize sampling in light of the fact that deliberate errors by people can happen in any random transactions, subsequently forensic audit carries out a 100% audit. Maulidi (2016) and Abdul (2018) noted that because of high volume of information required for forensic audits, it is normally done using computers. According to Sukamal (2014) forensic auditor carries out his audits on explicit allegations whilst the traditional auditor is required by the law to carry out statutory audits every year.

Soyemi (2014) indicated that a forensic auditor has a lot of time to examine and dissect altogether specific fake budgetary issues with accentuation of utilizing the proof in a court of law while that review done by a traditional auditor is general in nature. Manas (2014), Matsika (2017) and Mansor (2015) a traditional audit is done on general financial related issues, this implies that the auditor considers all issues associated with accounting. Jizi and Nehme (2018)

indicated that a forensic auditor is designated by organizations to determine claims and recognize or prevent false exercises suspected in the company making it anything but an ordinary audit as it may or may not follow auditing procedures. This was supported by Bosse (2016) who highlighted that such review is proactive review which goes past ordinary review techniques while a customary auditor carries out statutory audits to guarantee that fiscal reports are in accordance with GAAP. Ekiti (2017) posited that it may well be reasoned that a traditional auditor may not go past the procedural review as he is not compelled to look for fraud but if he comes across it in carrying out his review he will reveal it.

However, Nwanko (2014) and Eliezer and Emmanuel (2015) are of the view that both auditors are similarly as significant as the two of them play a review control role of the monetary information with the point of identifying fraud. Asare et al. (2015) identifying fraud is the obligation of external auditors and with a couple of exemptions they should discover it. This was bolstered by Ramaswamy (2017) who set that external auditors have a key task to carry out in fraud recognition. It is therefore a direct result of these distinctions in objectives, knowledge and skill of the two auditors that this research tried to research the viability of forensic auditing as a tool for detection and prevention of fraud.

2.4 To identify ways of improving forensic audit.

2.4.1 Training and development programs

As indicated by Jose (2014) and Macdonald (2015) forensic auditors need numerous abilities in order for them to carry out their specified job as a result education and training in book keeping, business as well as the ability to communicate with others are vital. This was supported by Eliezer and Emmanuel (2015), Ajomele (2015) and Muriithi et al. (2016) who suggested that meetings, classes and preparation projects ought to be sorted out to upgrade the aptitudes and capacity of expert accountants to manage fraud issues. Asare and Wright (2014) and Asare et al. (2015) proceeded to demonstrate that further studies proposed that the significance of training auditors to reason tactfully is to upgrade misrepresentation recognition abilities. Also Peter et al. (2014) and Soltani (2014) revealed that the lower level auditors are frequently presented to sections of the audit that could possibly direct them to proof of fraud yet these people have the least experience resulting in constrained information about extortion so they do not perceive when a fraudulent activity is taking place and this issue proposes for better training to assist lower level auditors in perceiving and conveying potential fraud indicators. DiNapoli (2016) and

Deb (2018) are of the thought that direction and training are imperative in keeping up the viability of the procedure for identification and avoidance of fraud and debasement and its general credibility.

According to Mohd and Muhammed (2014), Magali and Qiong (2014), Abdullar and Mansor (2015) and Adeidre (2016) the government needs to assist with induction and business related training to guarantee responsibilities and accountability concerning fraud are consistently followed and strengthened to such an extent that prescribed procedures are followed in the foreseeable future. Nipion (2015) revealed that forensic auditors should assume a significant part as master observers and fraud examiners and as such they ought to have a particular training and skill that empowers them to assume these jobs. This view was supported by Soltani (2014) and Asare et al. (2015) who showed that forensic accounting or techniques fighting against fraud can possibly work if the management is focused on it hence anti-graft offices ought to guarantee the accounting individual is well trained in the field of forensics. In addition Umeraziz (2014), Dada (2014) and Jose (2014) proposed that accountants must be well trained in the field of forensics and even as they become acquainted with the forensic field they ought to be retrained on regular interims. Oyedokun (2015) and Egbunike and Ekofo (2017) posited that educational certificates are acceptable yet further alumni training and advancement programs are fundamental on the off chance that one is to be the perfect forensic auditor. In this case trainings were held throughout the years however none according to forensic audit, this examination subsequently tries to evaluate the effectiveness of forensic audit taking into account the impact of training.

2.4.2 Use of professionals in forensic engagements

As indicated by Gregory (2015), Asare et al. (2015) and Asare and Wright (2014) it is assessed that a lot of white collar misconducts go undetected or whenever identified they are never mentioned due to the high status of the culprits involved. This view was supported by Akomolafe et al. (2017) who proceeded to state such violations require a profoundly well trained and experienced agent like an expert forensic auditor to thwart the event of such prominent misrepresentation. Moreover Deb (2018), Brinkman (2014) placed that the failure of corporate correspondence structures has caused the general population to understand that there is an extraordinary requirement for experts known as forensic auditors. In addition Macdonald (2015) and Petrascu and Tianu (2014) concur that the conventional auditor has impediments in

identifying extortion which forensic auditors will fill as they have the expert capacity back up by law to make discoveries.

On the other hand Abdullar and Mansor (2015) and Panu (2014) assert that the forensic auditor must consider whether his firm has the vital aptitude and experience carry out the work due to the notion that forensic examinations are specialist in nature. Eliezer and Emmanuel (2015), Agrawal and Cooper (2017) highlighted forensic accountants are prepared to look further than the numbers and manage the business real factors of circumstances. Jose (2014) and Lawal (2017) set that examination, understanding, rundown and the presentation of complex budgetary business related issues are noticeable highlights of the forensic profession accordingly because of this multifaceted nature accentuation should be set on who completes the examinations and whether they are equipped for the activity or not. Oyedokun (2015), Ehioghiren (2016) and Egbunike and Ekofor (2017) in agreement, revealed that educational credentials are acceptable in structuring a high level of expert skill in preferably particular areas rather than simply taking a conventional auditor with no forensic capabilities to complete a forensic review. Akelola (2014), Ezejiofor et al. (2016) and Mohd and Muhammed (2014) proceed to state where trial is viewed as the suitable endorsement, only well trained specialists should lead the investigation as persecution is a delicate issue and there is no room for errors. This research therefore seeks to take a look at the effect of expert knowledge and experience on the effectiveness of forensic audit as a device for detecting and preventing fraud.

2.4.3 Updating existing software

Dada (2014) and Abdulla and Mansor (2015) showed that as advancements begin in both the Information Computer Technology (ICT) world and other fields, fraudsters keep on prepping their own strategies towards fraud practice. Alao (2016) and Lokanan (2015) noticed that a significant test to the use of forensic auditing in Nigeria is that the law is not generally fully informed regarding the most recent progressions and innovation. This was supported by Onodi et al. (2015) and Akelola (2015) who recommended that laws in developing nations should be fully informed regarding the most recent progression in innovation to guarantee acceptability of proof in a law court for effective indictment of criminal and common cases. In addition Jose (2014) posited that the vast majority of the criminals behind extortion utilize advanced innovation accounting stunts to carry out complex fraud. This as indicated by Nipion (2015) and Zechariah et al. (2014) implies that the forensic accountants need well advanced technology to reveal

misrepresentation. This view was supported by Enofe et al. (2015), Akenbor (2014) and Knezevic (2015) services should exploit the modern accounting and auditing programming to upgrade proficiency and smooth activity of forensic accounting. In light of inquiries done by Smith and Crumbley (2014) a forensic auditor is relied upon to have skill in data innovation to enable them to keep up with the consistent changes in software accounting.

As indicated by Deb (2018) through utilization of present day forensic software products, a forensic auditor can go beyond ordinary audit in order to uncover fraudulent activities. Petrascu and Tieanu (2014) proceeds to highlight that creating modernized applications to aid the examination and introduction of monetary evidence is in this manner a necessity. Besides, DiNapoli (2016) showed that exploration has additionally demonstrated that proactive forensic data investigation utilizing modern computer analytical tests can recognize fraud that may stay unnoticed for a considerable length of time. This was supported by Muriithi et al. (2016) who proposed that to encourage the safeguarding, assortment, examination and documentation of proof, forensic auditors can utilize particular programming and computer equipment. Macdonald (2015) showed that there are numerous new advancements that permit the forensic auditors to get back erased records, figure out encryptions or codes and concentrate and sort information.

According to DiNapoli (2016) computers are regular devices utilized by the guilty parties behind white collar crimes and so as to locate the conclusive evidence the forensic auditors should have the option to thoroughly go through the organization's computer system. However, DiNapoli (2016) proceeded to state that without the best possible equipment that procedure can end up being troublesome. This examination accordingly looks to break down the adequacy of forensic audit in the detection of fraud and give suggestions with regards to how it should be improved.

2.5 Chapter Summary

As demonstrated within the introduction the focus of this chapter was to have a survey of the literature, discover issues not exhausted, and make suggestions for better practice in relation to the effectiveness of forensic auditing. The following chapter plans to outline the strategies actualized within the investigation.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

The research methodology was dictated by the researcher's area of study. The determination of strategies and their execution was directed by the questions of the researcher and these questions impacted by down to earth disputes such as the accessibility of resources. This chapter centered on the strategies connected amid the method of securing information, rationale behind each method and avocation of all the strategies utilized. In this chapter the concern is on the research design, information collection procedures, research tools as well as the introduction of information and the plan for analyzing.

3.1 Research design

Wyse (2014) defined the research design as the general arrangement for connecting the theoretical research problems to the relevant exact research. Moreover, Molina and Camion (2014) noted that the research design determines the technique to be used by the researcher in gathering information. It is the plan for gathering, measurement and analysis of information. The blueprint is conceived so as to get answers for the research questions. In order to enhance the reliability and the validity of the research, the mixed approach was employed. This was used to establish the effectiveness of forensic audit on the detection and prevention of fraudulent activities on a case study view. The research design will close the gap between the established objectives and what should be done to meet those objectives and questions.

3.2 Combined approach

In order to get rid of the detriments related with utilizing one methodology and promote the consistency of information the researcher utilized the combined approach as upheld by William (2017). This approach was chosen by the researcher due to the fact that it advances the systematic integration of both qualitative and quantitative data in the same investigation. Quantitative data was gathered through section A of the questionnaire which had closed ended questions which could be quantified through the use of a rating scale known as the Likert scale. Qualitative data was gathered from section B of the questionnaire which had open ended questions and interviews were also conducted and they are qualitative in nature. The method was chosen as it allows offsetting the shortcomings of both quantitative and qualitative thus

providing a more comprehensive and complete understanding of the study. In order to find the relationship between the dependent variable that is detection of fraud and the independent variable, forensic audit, the researcher employed multiple linear regressions. Therefore, an analysis of both quantitative and qualitative information was imperative in drawing out the effectiveness of forensic audit in identifying and preventing fraudulent activities.

3.3 Target population

Table 3.1: Target population and sample size.

Targeted	Target population	Sample size
Audit seniors	15	5
Audit trainees	55	18
Total	70	23

According to Kumar (2014) target population are people or parts that share similar qualities in a particular study. This implies that the whole group of people, units or objects that are of interest to the researcher or those who meet the qualities that the investigator is interested in studying. In investigating the effectiveness of forensic audit as a tool for fraud detection and prevention, a case study of PKF Chartered Accountants Harare workers was used. Preference was given to audit seniors and audit trainees which totaled 70 individuals as shown in Table 3.1 above. The total number of auditors was drawn in from an audit planner for the month of January 2020 which showed a total of 70 auditors available for audits. Preference was given to the external audit department as the researcher preferred those individuals who had an idea of what forensic audit was about and may have been previously engaged in forensic audit engagements. This was done to avoid gathering irrelevant information and failure to interpret the questions by engaging subjects who had no idea what the research was about.

3.4 Determining sample size

Sample size must be sensible as stated by Lutton (2015). According to Hale (2016) who recommended that 30% of the sample size is appropriate. The PKF audit planner (2020) showed 70 auditors planned for audits for the month of January. In this manner from the 70 auditors available at PKF Chartered Accountants just 23 were chosen to represent 32% of the target populace. Table 3.1 above showed that from the 15 audit seniors employed at PKF only 5 were

selected and 18 audit trainees were selected from the 55 trainees available, reasonably speaking to 33% of each level. The researcher also considered the fact that every one of the 70 auditors cannot be accessible at once due to the nature of their job which expects them to be at their clients almost all the time.

3.5 Sampling technique

Singh and Masuku (2014) revealed that the choice of subset people from a population to estimate the attributes of the entire populace is known as sampling. Sharma (2017) expressed that while setting up a sampling procedure one needs to consider a few factors, for example, population variance, and size of population, nature and objectives of the research.

In investigating the effectiveness of forensic audit as a tool for fraud detection and prevention random sampling technique was employed. Simple random sampling technique gives an equal chance to every element of the population to be selected. A set of random numbers were generated and placed in a hat, the auditors having those numbers were included in the study. In this case study, from PKF Chartered Accountants the randomly selected auditors were requested to fill the questionnaires. In the same manner, the researcher randomly conducted interviews with the selected auditors from the firm. Questionnaires were supplemented by interviews which were carried out to eliminate and detect any unclear questions in the questionnaire with regards to the effectiveness of forensic audit as a fraud detection tool as respondents sought clarification where and when they did not understand the question. This ensured the accuracy of answers provided as interview respondents only responded after understanding the questions.

3.6 Types of information

3.6.1 Primary information

Miles and Huberman (2014) characterized primary data as the direct understanding. Primary data is dependable, objective and genuine due to the fact it is first-hand information which has not been tampered with. This implies that the researcher documents the data about the effectiveness of forensic auditing as it is without fear that it has been altered in any way. In addition, primary data is the data which has not been processed hence the validity when contrasted with secondary data as it is associated with fewer mistakes. This study used primary data which was obtained through questionnaires and interviews. Data collected was specifically meant to evaluate the

effectiveness of forensic audit as a tool for the detection and prevention of fraudulent activities using PKF Chartered Accountants as a case study.

3.7 Research Instruments

As indicated by Kolbaek (2014) research instruments include the accumulation of standard discoveries data and tools used to assemble information. The researcher employed well-structured questionnaires with closed and open ended questions to gather primary data from PKF Chartered Accountants. The questionnaire involved compiled questions that were given to the sample population. Personal interviews were also carried out by the researcher so as to deal with the shortcomings of the questionnaire and also seek more detail from the respondents.

3.7.1 Questionnaires

In this research, first segment of the questionnaire had closed ended questions based on the five point Likert scale, that is, strongly agree, agree, unsure, disagree and strongly disagree accompanied by numerical values correspondingly connected to each state 5,4,3,2 and 1 hence quantifying the primary data from of the selected sample of 23 people. Kumar (2014) indicated that the Likert scale is utilized to decipher the correspondent's level of agreement, impartiality and contradiction. The Likert scale therefore made it easy for the researcher to group like thoughts, that is, those who agreed on the effectiveness of forensic audit and those who disagreed without struggling to understand the position of the respondent with regards to the research questions. Open ended questions were additionally utilized as the last part was unstructured and permitted respondents a liberated opportunity to offer general remarks as they considered fit on the effectiveness of forensic audit as a tool for fraud detection and prevention. The questionnaire was designed to meet the research objectives. The questionnaires gave the respondents more opportunity to consider their reactions and answer honestly. It also removed interviewer bias and the respondents were free to express their exact position with regards to the effectiveness of forensic auditing as a fraud detection and prevention tool.

3.7.2 Interviews

The researcher made use of personal interviews to ensure that there is qualitative information which comprehend the questionnaire from the selected sample of auditors. According to Creswell (2016) it is a logical method for talking and listening to individuals so as to acquire the necessary data. The interviews provide depth in terms of information provided as the respondents

give out their answers until they feel they have fully exhausted the question without worrying about the responses not fitting on very limited spaces to fill in their responses. In evaluating the effectiveness of forensic auditing as a fraud detection tool utilizing interviews the respondent can easily see if the researcher has not understood responses given and further clarify on the issue hence providing the researcher with complete information.

3.8 Ethical presentation

According to William (2017) standard practices that society all in all considers moral must be followed. Information gathered from PKF Chartered Accountants was exclusively for this study on the effectiveness of forensic audit as a tool for fraud detection and prevention. The researcher sought consent from the firm as the firm emphasized on the sensitivity of the information therefore printed copies of data acquired during the data collection process were to be kept private in order to keep up the company's confidentiality policy. Seeking company consent was done to ensure information gathered remained reliable and valid as approval from the firm signified that the data collection took place and information gathered was true. For reasons of preventing unoriginality proper acknowledgement was given concerning thoughts acquired from different researchers and records within the firm. However, it was time consuming for the researcher to obtain all the information required due to confidentiality policy of the organization therefore slowing down the progress of the research on the effectiveness of forensic audit as a fraud detection tool.

3.9 Data Validity

According to Sullivan and Artino (2018) data validity alludes to the degree of unwavering quality and importance in data collection. It includes review of the questions to be included in the study instrument to ensure that only applicable information is gathered. The research supervisor assessed the questionnaires and interview guides to ensure they were significant to the investigation. With reference to this research on the effectiveness of forensic auditing as a tool for fraud detection and prevention data gathered was valid and dependable in light of the fact that questionnaires were made genuinely short, clear and explanations were given on the best way to fill the questionnaires. Primary data obtained from the research instruments was dependable because it was first-hand information relating to the effectiveness of forensic audit which was not distorted from processing. The research instruments used managed to offset the shortcomings of the other providing a more comprehensive and complete understanding of the study. A

probability sampling technique called random sampling was employed therefore the data obtained represented the total sample. This was because random sampling eliminates bias as participants were selected randomly to avoid picking those who might want to respond in a manner favorable to the study as they may share a personal relationship with the researcher. The above factors therefore helped validate data collected with regards to the effectiveness of forensic audit as a tool for fraud detection and prevention.

3.10 Data Reliability

Wyse (2014) posited that data reliability is the capacity of data gathered to meet its endorsed purpose. To guarantee that information gathered is reliable the researcher chose workers based on the suitable sampling technique. The simple random sampling technique that was used ensures an equal chance of all the elements of the population to be selected and this was to eliminate any bias associated with handpicking participants. For purposes of comparability similar questions with regards to analyzing the effectiveness of forensic auditing were asked to all participants and this also assisted in confirming the reliability of the data collected. The researcher confirmed the reliability of the data gathered by comparing responses gathered through questionnaires and those from interviews to see if they complemented each other as similar questions were asked in both instruments. This helped strengthen the reliability of data collected on the effectiveness of forensic audit as a tool for fraud detection and prevention as the responses seemed to go hand in hand.

3.11 Data presentation and analysis

3.11.1 Data presentation

A quick verification was made to all the questionnaires received from the respondents to check whether all the questions were responded to and to see if any questions were not responded to. The information gathered was presented in form of tables, pie charts, column graphs and bar graphs whichever was comprehensive. Data presented was explained just below the data presentation tool and raw data was also included. Data presentation and explanation was done in an effort to make it easy to understand the research findings on the effectiveness of forensic auditing as a tool for fraud detection and prevention using PKF Chartered Accountants as a case study.

3.11.2 Data analysis

Data analysis is done to make it easy to understand the arrangement of answers to the research problem thus narrative description was utilized to additionally decipher and break down information.

Model Specification

In order to decide the relationship between the independent and dependent variable, the research used multiple regression analysis. In this study, effectiveness of forensic auditing is measured by variables such as financial investigation, skills and level of education, experience and litigation support as independent variables. Fraud is an independent variable which is being measured by fraud detection. However, the researcher made use of different variables in order to explain the effectiveness of forensic auditing on the detection and prevention of fraudulent activities. The model is also essential as it permits the researcher to decide the significance of every factor to the study. The study is tested at 95% confidence level and 5% significance level. The multiple regression analysis was used as follows,

$$\gamma = \beta_0 + \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \beta_4\chi_4 + \mu$$

Where γ is fraud which is the dependent variable.

β = Parameter

χ_1 = Financial investigation

χ_2 = Skills and level of education

χ_3 = Experience

χ_4 = Litigation support

χ_5 = Training

χ_6 = Resources

μ = Error term

3.12 Chapter Summary

This chapter addressed the research design and justifications of the research design as well. Data sources were briefly evaluated and research tools chosen to help in data collection. Reliability and validity of the collected data was also evaluated and credit was given to ethical research practices to protect and safeguard the research project. Presentation and analysis of data collected will be done in the next chapter.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

Chapter four aims to present and analyze data collected using the methodology that was stipulated in the previous chapter. Findings and analysis were directed towards answering the research questions and addressing the research objectives in studying the effectiveness of forensic audit as a tool in the detection and prevention of fraudulent activities.

4.1 Questionnaire response

Table 4. 1: Questionnaire response rate

Participants	Questionnaires administered	Questionnaires answered	Returned
Audit seniors	5	4	1
Audit trainees	15	15	0
Total	20	19	1

Table 4.1 above shows the response rate obtained by the researcher from the questionnaires issued to the respondents. 4 out of 5 seniors answered the questionnaires giving an 80% response rate and 20% non-response rate from the audit seniors. 15 out of 15 audit trainees answered the questionnaires resulting in a 100% response rate from the audit trainees. Total questionnaire response rate was 95% as 19 out of the 20 people selected managed to answer the questionnaires. According to Bryman and Bell (2015) anything more than 50% is considered dependable and relevant and this research's response rate exceeded that by 45%.

As indicated by Hale (2016) in any event 30% of the objective populace is viewed as sensible. The researcher managed to keep up the reasonable number of individuals required to make the information dependable as 19 individuals responded through questionnaires and 3 individuals responded by means of interviews bringing about an aggregate of 22 respondents from an objective populace of 70 individuals to represent 31% of the target population. For the purpose of reliability and validity, the researcher sought authorization from the firm and questionnaires

were stamped after the respondents had filled in the questionnaires. This was to avoid data gathered outside the firm being said to have been gathered inside the firm.

4.2 Results and findings

4.2.1 Which of the following perpetrated the need for forensic auditing services?

Failure of external auditors to detect and prevent fraud, failure of internal auditors to detect and prevent fraud, weak or absence of internal controls and failure of management and those charged with governance effectively carry out their duties with regards to fraud are some of the factors that have been said to have led to the birth of forensic audit. The following tables, pie charts and graphs will show what the respondents think about each factor;

Raw data

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	2	9	2	1	5

Fig 4. 1: Failure of external auditors to detect fraud

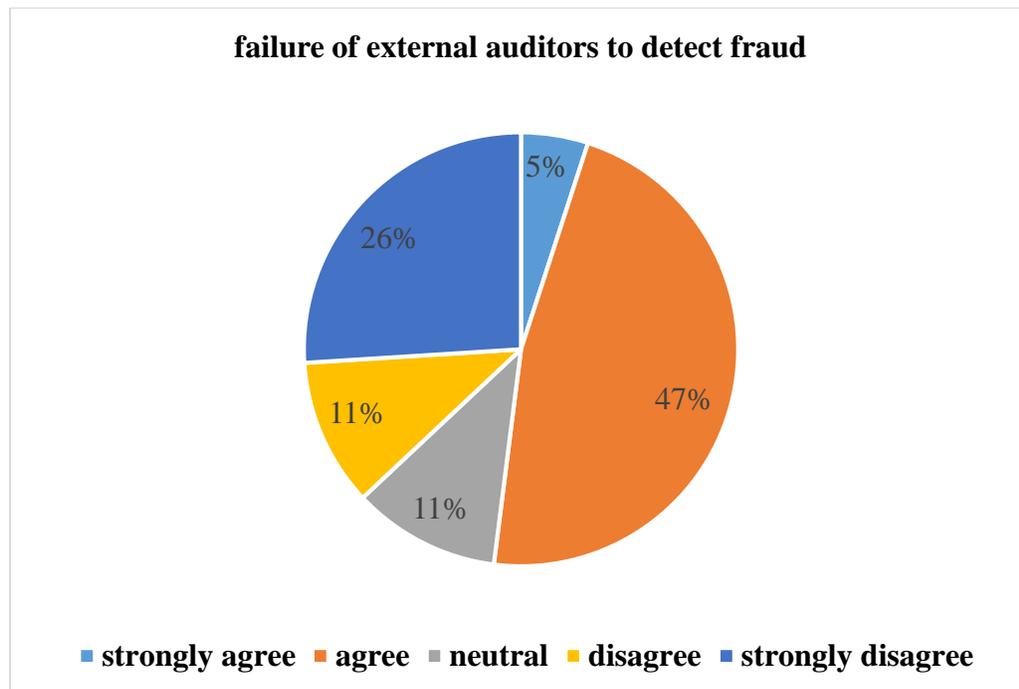


Fig 4.1 above shows that out of a total of 19 respondents 2 (11%) strongly agree, 9 (47%) agree, 2 (11%) were neutral, 1 (5%) disagrees and 5 (26%) strongly disagree that the failure of external auditors to detect fraud led to the birth of forensic auditing. A total of 11 out of 19 respondents (58%) agree that failure of external auditors to detect and prevent fraud led to the birth of forensic auditing. This means that the more the external auditors failed to detect fraud the more the services of a forensic auditor were sought by organizations. Njanike et al. (2014) revealed that KPMG completed two successive reviews and neglected to identify fraud which was later found by forensic auditors. Ng'ang'a (2015) proceeds to specify that the validity of the external audit process has been flawed in numerous nations because of the numerous financial related outrages and mega frauds which prompted the breakdown of numerous nations because of a number of big companies consequently the requirement for forensic audit departments which appear to be solid right now. Annual Progress Report (2019) indicated that the decrease in the external audit clientele base from 80 clients to 74 clients in 2019 was as a result of having invested so much time and external audit personnel in the forensic audit engagement accepted in 2019 such that the external audit department was understaffed and unable to meet deadlines for the other clients. Engaging external auditors in a forensic review is an issue as indicated by Okoye and Gbegi (2014) who are of the thought that there is a huge distinction between external and forensic auditors, as external auditors do not or might not have sufficient training to handle present day fraud like white collar crimes for example embezzlement and security fraud bringing about the requirement for forensic auditors.

This view was also supported by interviewee 3 who explained that external auditors cannot possibly not come across fraud each and every time they carry out an audit. Chances are once in every five audits they come across fraud but choose not to disclose it. This view goes in line with that of Dada (2014) who argued that perverse incentives which are created by the law if they perceive they will face punishment for identifying fraud by being held liable responsible for the period lapsed without the fraud being detected and this compels auditors to work with management in hiding fraudulent activities. Bassey (2018) also mentioned that there is in this manner an unconscious bias by examiners in supporting customer inclinations because of the desire to satisfy the board who are instrumental in holding the audit firm for its administrations.

On the other hand a total of 7 out of 19 respondents (37%) disagree that the failure of external auditors resulted in the birth of forensic audit services. This means that there is no relationship

between the failure of external auditors and the birth of forensic audit. This view was also backed by interview response from the second respondent which stated that it is not the external auditor's job to detect fraud therefore he should not be blamed. Popoola (2014) is of the idea that people in general should not rush to presume that the external auditor has failed due to the fact that the conventional auditor accepts that it is not his essential obligation to identify fraud hence the auditor is hesitant to identify fraud. Moreover 2 out of 19 respondents (11%) were not sure as to whether the failure of external auditors led to the birth of forensic auditors or not.

The researcher therefore concludes that the failure of external auditors to detect fraud therefore initiated the birth of forensic auditing services as 58% of the respondents backed by one interview respondent share this view. The firm should therefore train its external auditors in the detection of fraud such that even in executing their external audits they can still detect fraud.

Raw data

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	8	10	0	1	0

Fig 4. 2: Failure of internal auditors to detect fraud

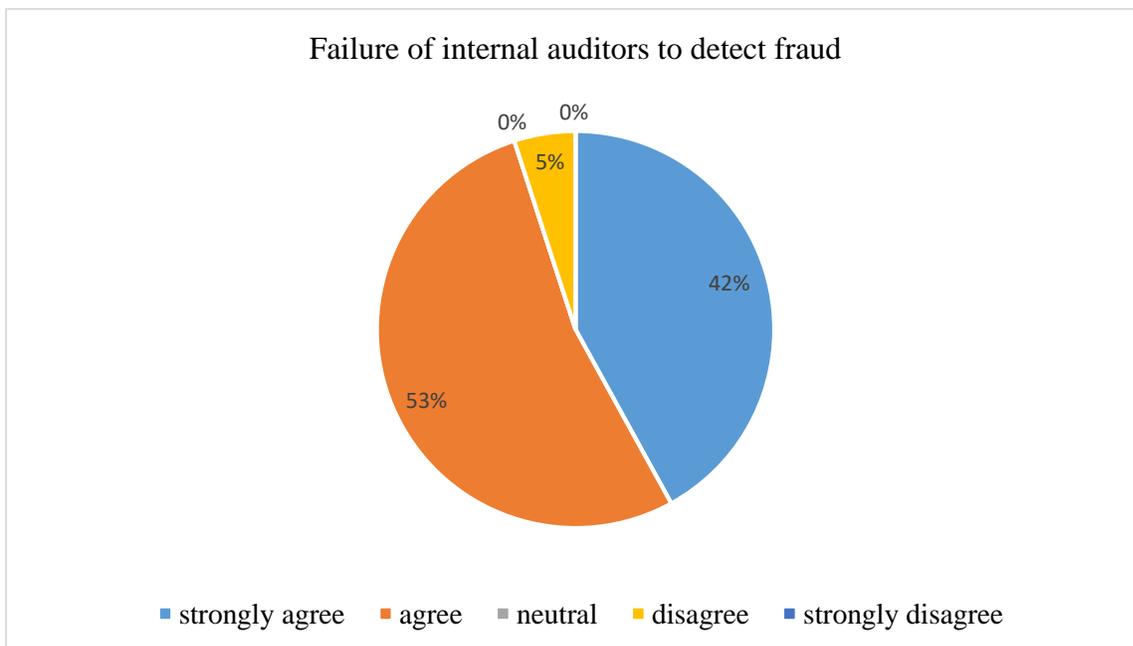


Fig 4.2 above shows that 8 out of 19 respondents (42%) strongly agree, 10 out of 19 respondents (53%) agree and 1 out of 19 respondents (5%) disagree that the failure of internal auditors to detect fraud perpetrated the need for forensic services. A total of 18 respondents (95%) therefore agree that the failure of internal auditors to detect and prevent fraud led to the birth of forensic audit. This means that as the internal auditors failed to detect and prevent fraud the need for forensic audit services grew. This view lines up with that of Ng'ang'a (2015) who posited that fraudulent exercises have been in the financial reports for quite a long time in spite of external and internal auditors. Aborbie (2015) proceeds to make reference to that this incapability radiates from the complexities of modern day fraud making it hard for internal auditors to keep up making a gap for forensic auditors. Yego (2016) and Wells (2014) set that poor internal controls bring about misrepresentation and this can be prevented if the internal auditing staff completes periodic appraisals along these lines this failure can be connected to the internal examiners.

However, 5% of the respondents disagree that failure of internal auditors to detect and prevent fraud gave rise to forensic audit services. This means that the growing need for forensic auditors cannot be linked to failure of internal auditors. This is in line with Biddix (2015) and Oyedokun (2015) who revealed that a lot of fraud is identified by internal auditors were quickly dismissed as the board have power over internal auditors hence the failure should be shifted to management. It was therefore found that the failure of internal auditors to detect fraud led to the need for forensic audit services as 95% of the respondents supported by third interview respondent are for this notion. In their audit reports to management the auditors should make recommendations on how their clients could improve the internal audit function and reduce or even curb fraudulent activities.

Raw data

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	10	8	0	0	1

Fig 4. 3: Response on weak or absence of internal controls

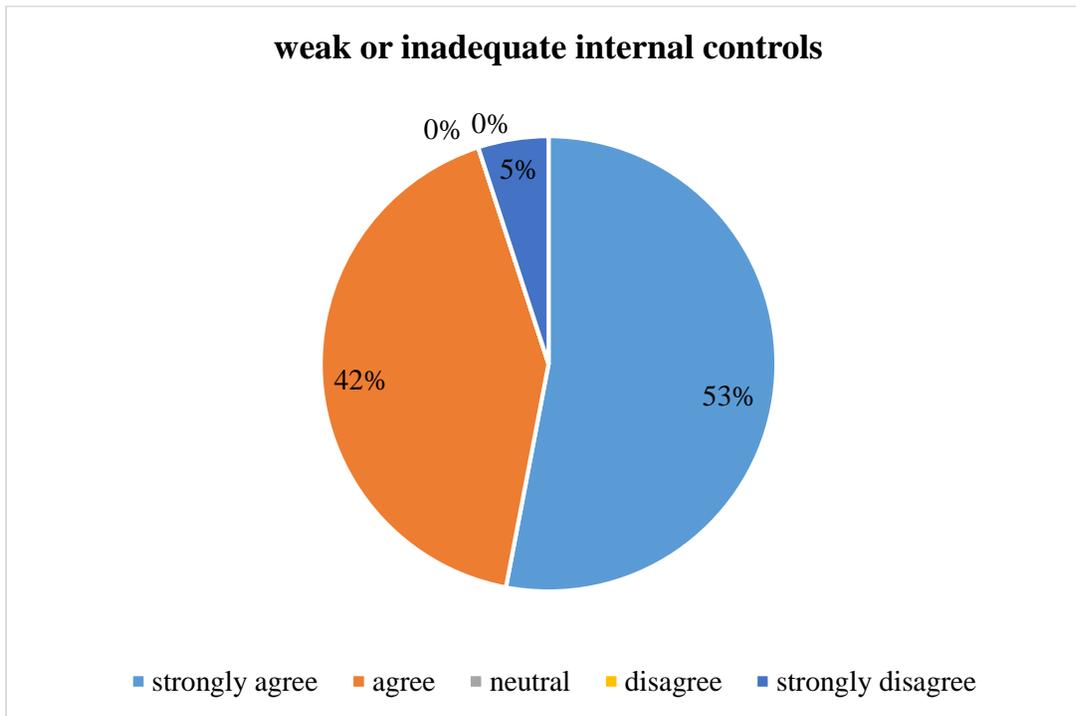


Fig 4.3 above represents 19 respondent made up of 10 who strongly agree, 8 who agree and 1 who strongly disagrees that or inadequate internal control systems led to the need for forensic services. A total of 18 respondents (95%) therefore agrees that the weak internal controls raised the need for forensic services in other words this means that the weaker the internal controls the higher the number of fraudulent activities taking place and the forensic services would then be required to investigate these fraudulent activities. Onodi et Al (2015) is of the idea that some obvious detection of fraud was due to repeated failures in internal controls. Akelola (2015) and Lokanan (2015) concur that a chance to commit fraud should be connected to insufficient inside controls. Report to management (2019) revealed that the deceitful exercises happened because of consistent setbacks in the internal control frameworks.

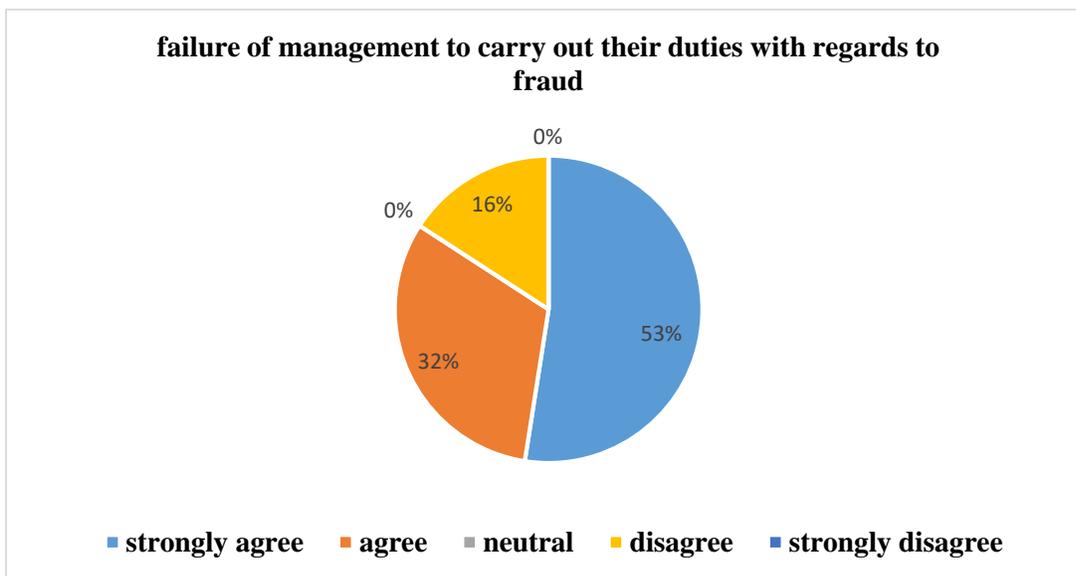
On the other hand 1 respondent (5%) disagrees that the internal control weaknesses are to blame for the increase in the need for forensic auditing. This view was supported by Michael Comer (2017) believes that it is not really the shortcomings of internal controls that causes extortion but instead inability to identify signs that things are not exactly right. Location of fraud starts with the red flags which show that something is not right as per Petrascu and Tieanu (2014). Based on the fact that 95% of the respondents are in agreement it is only reasonable that the researcher

concludes that weak or inadequate internal control systems should be blamed for the growing relevance of forensic audit.

Raw data

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of Respondents	10	6	0	0	3

Fig 4. 4: Response on failure of management and those charged with governance to carry out their duties effectively.



10 respondents strongly agree, 6 respondents agree and 3 respondents disagree that the failure of management to carry out their duties with regards to fraud led to the rise of forensic audit as shown in Fig 4.4 above. A total of 16 respondents (84%) therefore agree that management’s failure should be linked with the growing relevance for forensic audit services. Akelola (2014) and Aborbie (2015) and Okoye (2016) share a similar view as they highlighted that the essential duty to recognize and prevent fraud rests with the board and those charged with administration. Ng’ang’a (2015) proceed to state that poor corporate administration and accounting failures have been cited as a portion of the plans for fraud. It is the expansion in fraud causes that has in this manner caused the upward move in the need for forensic audit services. Report to management (2019) revealed that the fraudulent exercises happened because of constant incidents in the

internal control frameworks and as per Osunwole (2015) the obligation of internal controls rests with management.

In contrast 3 respondents (16%) disagree with this view as management is simply trusting the other staff connected to the internal controls to effectively carry out their duties. According to Adeidre (2016) management’s reluctance is based on the fact that since they are in a position of authority, they can delegate and entrust their subordinates to effectively protect the internal control system. However, the researcher concludes that management failure to effectively carry out their duties with regards to the growing relevance of forensic audit as 84% of the respondents were for this view. The auditors should make recommendations on how management can improve their internal control systems and increase supervision so as to not leave any room for fraud to take place.

4.2.2 Is forensic audit an effective tool in the detection and prevention of fraud?

Prior researches indicated that the effectiveness of forensic audit could be measured based on a number of factors amongst them being its ability to detect fraud, its ability to provide evidence that is admissible in a court of law and also its ability to carry out financial investigations and solve business disputes. The following are the respondents’ views with regards to these factors.

Raw data

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	11	7	0	1	0

Fig 4. 5: Response on ability to detect fraud.

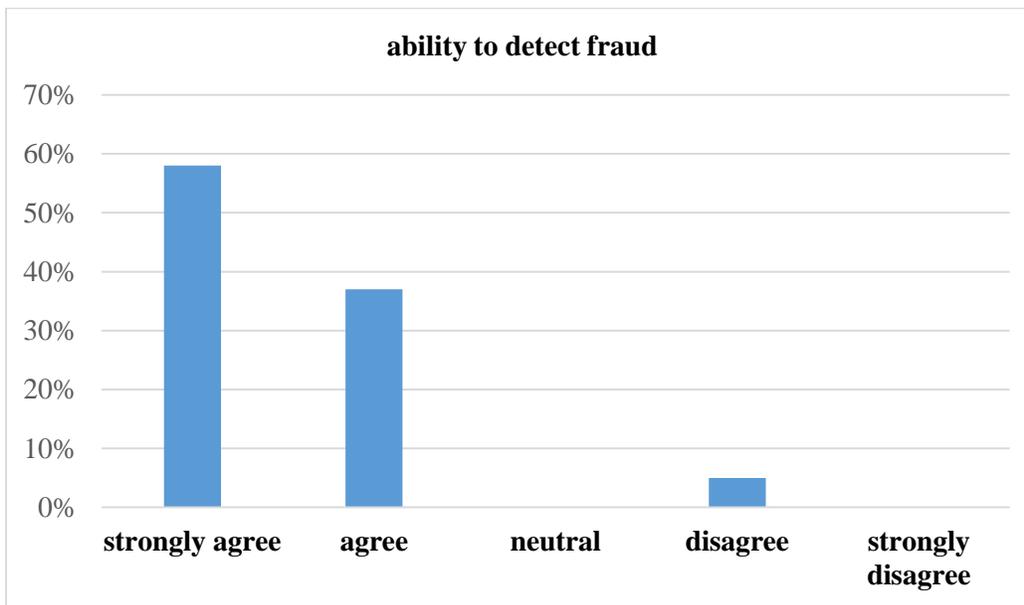


Fig 4.5 above shows that 11 respondents (58%), 7 respondents (37%) and 1 respondent (5%) strongly agree, agree and disagree that forensic audit has the ability to detect fraud respectively. This adds up to a total of 18 respondents (95%) who agree that forensic audit has the ability to detect fraud. This means that there is a positive relationship between forensic audit and fraud detection. This was in accordance with Eliezer and Emmanuel (2015) who showed that with the utilization of expository and technological aptitudes a forensic auditor can without much of a stretch distinguish misrepresentation executed by the board hence avoid corporate failure. Zhaol et al. (2014) gave a case whereby a forensic audit group had the option to reveal an enormous extortion plot for their client as external auditors had neglected to do as such in their statutory audit. According to PKF Annual Progress Report (2017) PKF Chartered Accountants carried out a forensic audit in 2017 and they managed to detect fraudulent activities and this resulted in the respondent's confidence that forensic audits are indeed capable of detecting fraudulent activities.

However, 1 respondent (5%) disagrees that forensic auditing is capable of detecting fraudulent activities. In other words there is a negative relationship between forensic audit and fraud identification. In their study, Okafor and Onyali (2015) analyzed the viability of the utilization of forensic audit administrations in the Nigerian stock trade and showed its incapability as it needs specialized skill and resources and in this manner fraudulent activities are being done regularly. Odunayo (2014) posited that as forensic auditors win fraud cases the fraudsters keep on

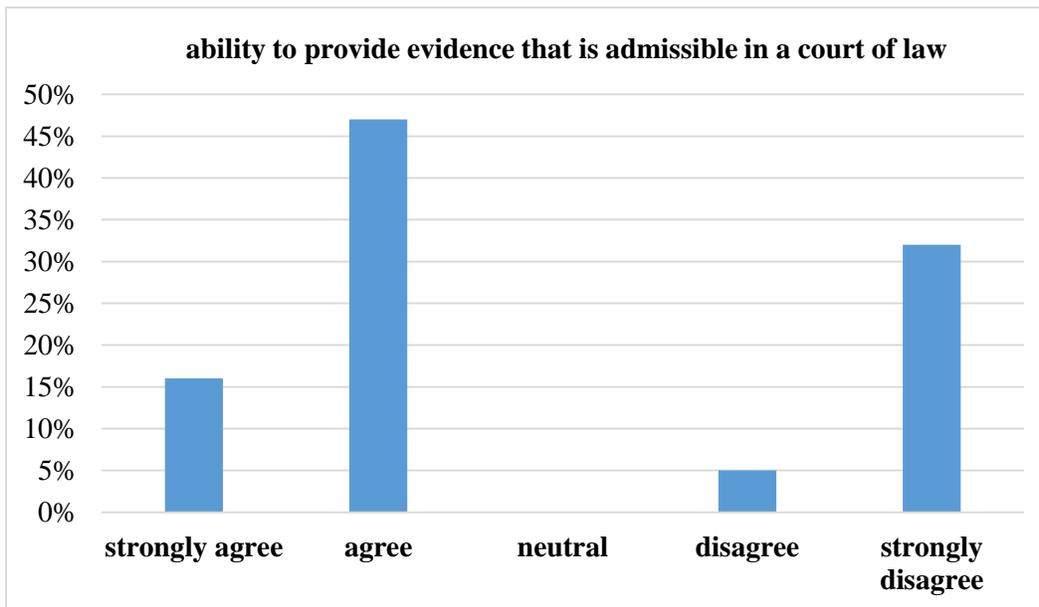
preparing their strategies and advance their procedures making it hard for forensic examiners to identify fraud hence an expansion in forensic accounting is trailed by a reduction in the capacity to recognize fraud.

It was therefore concluded on the basis of 95% response rate, that forensic auditing is an effective tool in the detection of fraud. In order to improve the auditor’s ability to detect fraud the firm should frequently train and retrain its staff in the field of forensic auditing.

Raw data.

	Strongly Agree	Agree	Unsure	Strongly Disagree	Disagree
Number of respondents	3	9	0	1	6

Fig 4. 6: Ability to provide evidence that is admissible in a court of law.



Shown in Fig 4.6 above is 3 respondents (16%) who strongly agree, 9 respondents (47%) who agree, 1 respondent (5%) who disagrees and 6 respondents (32%) who strongly disagree on the ability of forensic audit to provide evidence that is admissible in a court of law. This results in a total of 63% supporting that evidence gathered by forensic auditors can be used in a court of law as supported by Igbaekemen (2014) who indicated that fraud examiners are known as fraud

fighting experts as they have investigating, auditing and accounting skills to assist in legal matters and provide enough information that is admissible in a court of law.

However a total of 7 respondents (37%) disagree that the information gathered by forensic auditors is admissible in a court of law. Agbaje and Adeboye (2014) argued that there is no compelling reason to depend on forensic auditing as external auditors are well prepared in all situations to detect a wide range of fraud and give proof which may really be helpful. Albretcht (2015) additionally highlighted that fraud is once in a while observed as fraudsters are getting more and more astute because of the potential errors people can cause making it hard even for legal examiners to detect fraud.

It was therefore found that forensic audit evidence can indeed be relied on to provide evidence that may be used in court as a reasonable number of the respondents (63%) were in support of this view. Training sessions should also cover confidence coaching such that when asked to stand in a court of law the auditors can be able to explain the evidence they gathered and not contradict it.

Raw data.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	2	13	0	4	0

Fig 4. 7: Response on ability to carry out financial investigations and solve disputes.

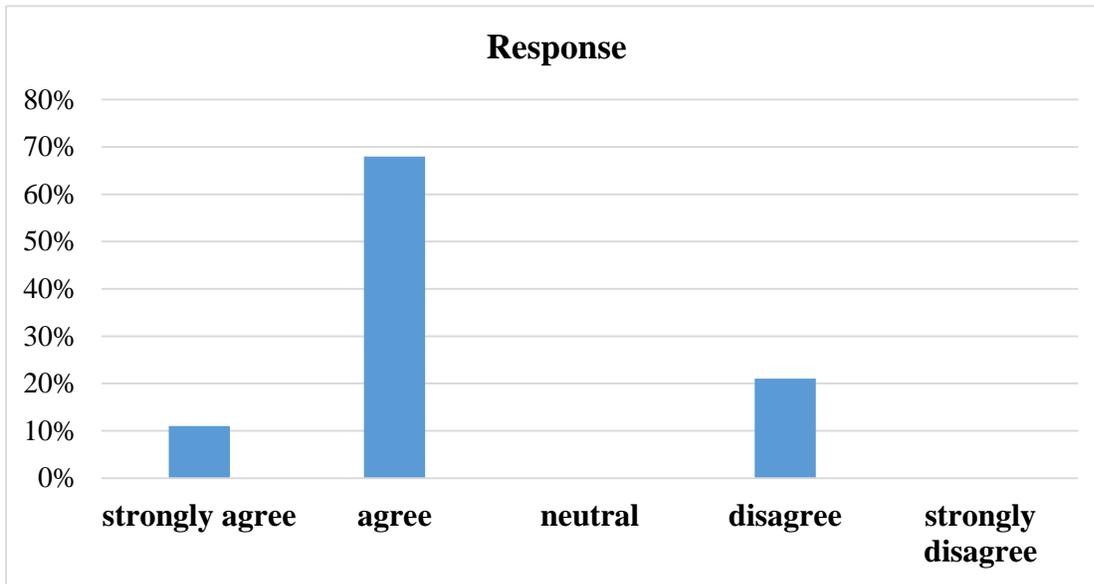


Fig 4.7 above shows that 2 respondents (11%) strongly agree, 13 respondents (16%) agree and 4 respondents (21%) disagree respectively, that forensic audit has the ability to carry out financial investigations and solve business disputes. A total of 15 respondents (79%) agrees with this view that forensic audit can carry out financial investigations and solve business disputes. This view was supported by Sukamal (2014) who placed that forensic accountants assume a critical role in measuring the damages faced by parties included and assist in settling those disputes. Olaoye and Dada (2014) also revealed how forensic auditors are approached to become an integral factor in financial related examinations and business related issues because of increasing complexities of the business condition which is helpful for fake exercises to happen. PKF Annual Progress Report (2019) revealed that the firm successfully carried out its forensic engagement by detecting the alleged fraud hence any pending disputes were solved with regards to this fraud in particular.

On the other hand 4 respondents (16%) disagree that forensic auditors are capable of carrying out business investigations and solving any disputes. This was upheld by Zhaol et al. (2014) who argued that forensic review is not effective in identifying and preventing extortion as a specific forensic accounting group could not reveal huge fraud plans and the proof they gave was not sufficient to be introduced in a courtroom bringing about the inability to settle these internal debates. As a result it was concluded that forensic audit is fit for doing business examinations

and settling questions as 79% of the respondents had a similar view. PKF Chartered Accountants should employ at least five experts who are skilled in the area of business investigation and settlement of disputes to ensure that their audits are capable of delivering such a service.

4.2.3 Which of the following factors influence the effectiveness of the forensic auditors?

The impact of knowledge, training and availability of resources, practical experience and level of education had been overlooked by previous researches therefore this research sought to determine how these factors influenced the effectiveness of forensic auditing. The following graphs show what the respondents think in relation to these factors and their influence on forensic audit;

Raw data.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	10	8	0	1	0

Fig 4. 8: Response on the impact of training.

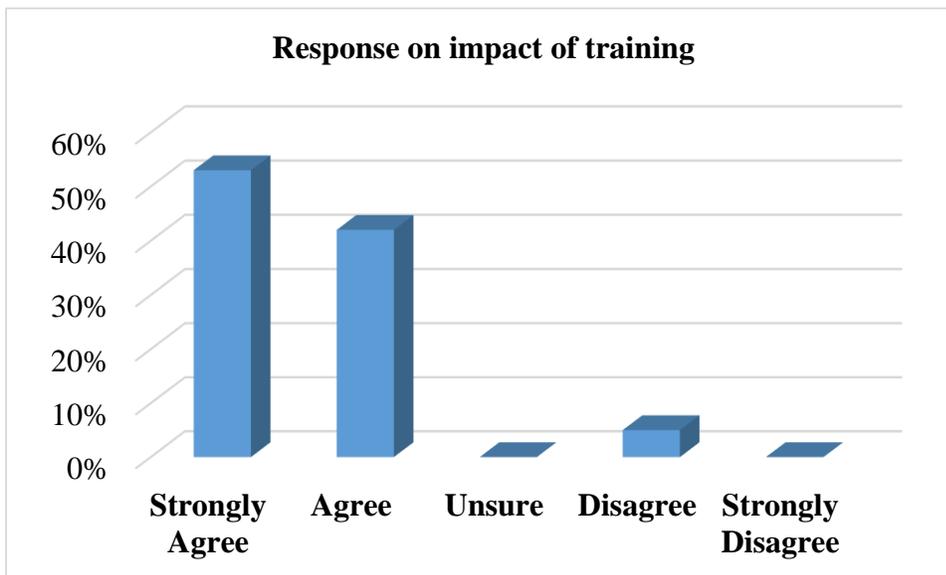


Fig 4.8 above shows that 10 respondents (53%) strongly agree, 8 respondents (42%) agree and 1 respondent (5%) disagree that training has an influence on the effectiveness of forensic audit. This resulted in a total of 95% of the respondents agreeing that training has an impact on forensic

audit meaning there is a positive relationship between the level of training and the effectiveness of forensic audit. This was upheld by Asare et al. (2015) who highlighted that training, experience and knowledge of an auditor seem to play a huge and generally equivalent part in repressing examiners from detecting fraud. This was in accordance with Okoye and Gbegi (2014) who recommended the significance of training auditors to reason deliberately and upgrade their fraud identifying abilities as Njanike et al. (2014) indicated that most forensic audit divisions experience struggle due to absence of knowledge and training on the forensic field making it hard for them to identify fraud. PKF Annual Progress Report (2019) indicated that the firm ought to establish a fully functional forensic audit department with experienced and qualified personnel and also fairly allocate training sessions to all four departments of the firm regardless of what percentage it constitutes on the clientele base if the forensic service provision was to be effective.

However 5% of the respondents disagree that training has an impact on the effectiveness of forensic audit meaning there is a negative relationship between the level of training and the effectiveness of forensic audit because as the forensic auditors upgrade their skills the fraudsters also improve theirs making it difficult for forensic auditors to keep up with the changes in technology. This was upheld by Odunayo (2014) who posited that as forensic examiners fail to win fraud cases the fraudsters keep on upgrading their systems making it hard for forensic auditors to recognize fraud hence an expansion in forensic accounting administrations is trailed by a reduction in the capacity to detect fraud.

It was therefore found that training has an impact on the effectiveness of forensic audit as 95% of the respondents together with 2 interviewees were in agreement with this view, Training sessions for forensic audit should therefore be held so as to further equip existing auditors with knowledge of forensics and improve their capabilities.

Raw data.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	11	7	0	1	0

Fig 4. 9: Response on the impact of the availability of resources

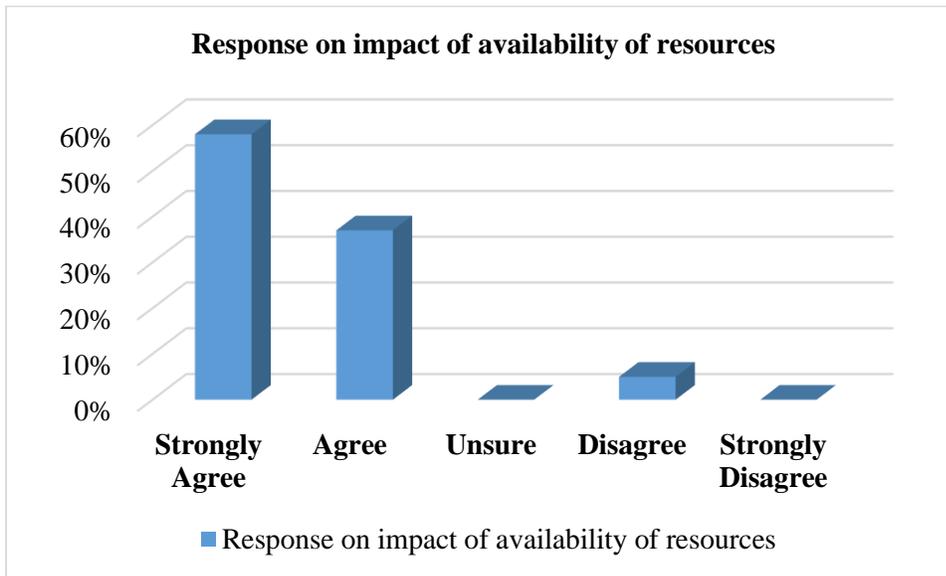


Fig 4.9 shows that out of the 19 respondents 11 strongly agree (58%), 7 agree (37%) and 1 disagrees (5%) that the availability of resources has an impact on the ability of forensic audit to detect and prevent fraud. Summation of those in agreement amounts to 18 respondents (95%) and this means that they share the view that as resources become adequate the ability to detect fraud increases. As indicated by Njanike et al. (2014) most forensic audit divisions experience lack of resources making it hard for them to fulfill their obligations. Onyali (2014) and Ajomele (2015) managed to uncover that forensic review end up being ineffectual in the Nigerian stock market since the forensic examiners lack specialized skill and resources. PKF Annual Progress Report (2018) the firm turned down a number of forensic audit engagement requests as they were complex and could possibly strain the firm's resources as it had no adequate resources to carry out the audit.

5% of the respondents disagreed that the availability of resources influenced the effectiveness of forensic audit. Adeidre (2016) discusses how the issue of resources is based on opinions as a firm could need human resources yet it has the sufficient software required hence a couple of individuals would still be able to carry out the forensic audit as long as they have an idea of how the software works. Moreover the researcher concludes that there is a positive relationship between the availability of resources and the effectiveness of forensic audit as only 5% of the respondents disagree leaving 95% in agreement. The audit firm should establish a fully

functional forensic department with adequate resources so as to improve the quality of its services.

Raw data.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	10	5	0	4	0

Fig 4. 10: Response on the impact of knowledge and level of education.

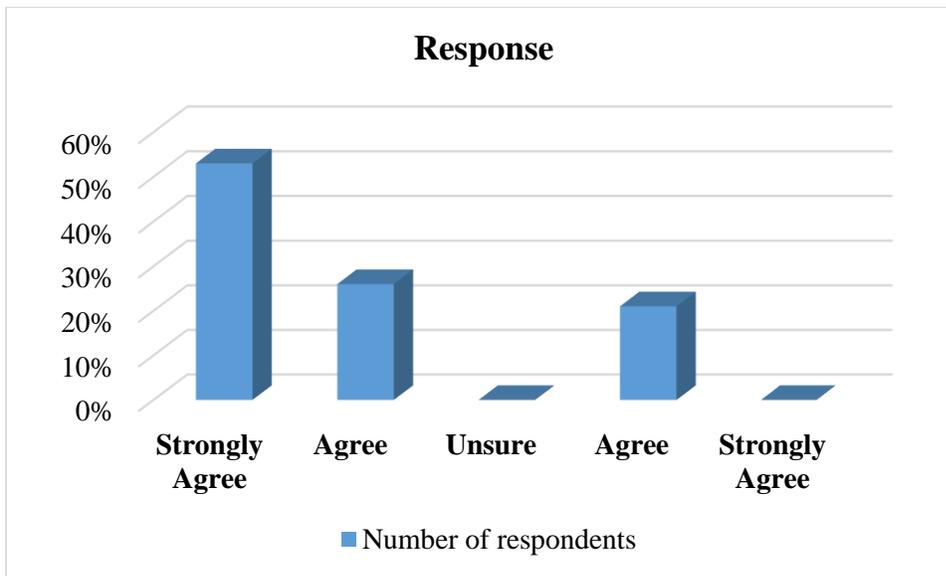


Fig 4.10 above shows 10 respondents strongly agreeing (53%), 5 respondents agreeing (26%) and 4 respondents (21%) disagreeing that knowledge and level of education have an impact on the effectiveness of forensic audit. In aggregate 15 respondents (79%) agree with this view that the higher the level of knowledge and experience the higher the ability to detect and prevent fraud effectively. As per Ajomele (2015) the majority of Chartered Accountants and University instructors are of the view that accountants do not have the ability to complete forensic examinations as college degrees offered in developing nations do not focus much on the forensics field and if they do forensic examinations they are probably going to be inadequate. Asare et al. (2015) proceeds to reveal that the audit procedure, training and knowledge plays a

noteworthy and generally equivalent role in restraining auditors from viably detecting fraudulent exercises.

However 4 respondents (21%) disagreed with this view as there are other factors which contribute to the effectiveness of forensic auditing such as level of education and exposure. According to Oyedokun (2015) and Egbunike and Ekofor (2017) affirmations are acceptable yet further graduate training and development in education are the imperative if one is to be the perfect forensic examiner. The researcher therefore concluded that training increases the effectiveness of forensic audit as 79% of the respondents together with one interview respondent were in support of this view. PKF Chartered Accountants should employ qualified forensic auditors to improve the ability of its forensic audit department to detect fraud.

Raw data.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Number of respondents	10	8	0	1	0

Fig 4. 11: Response on practical experience

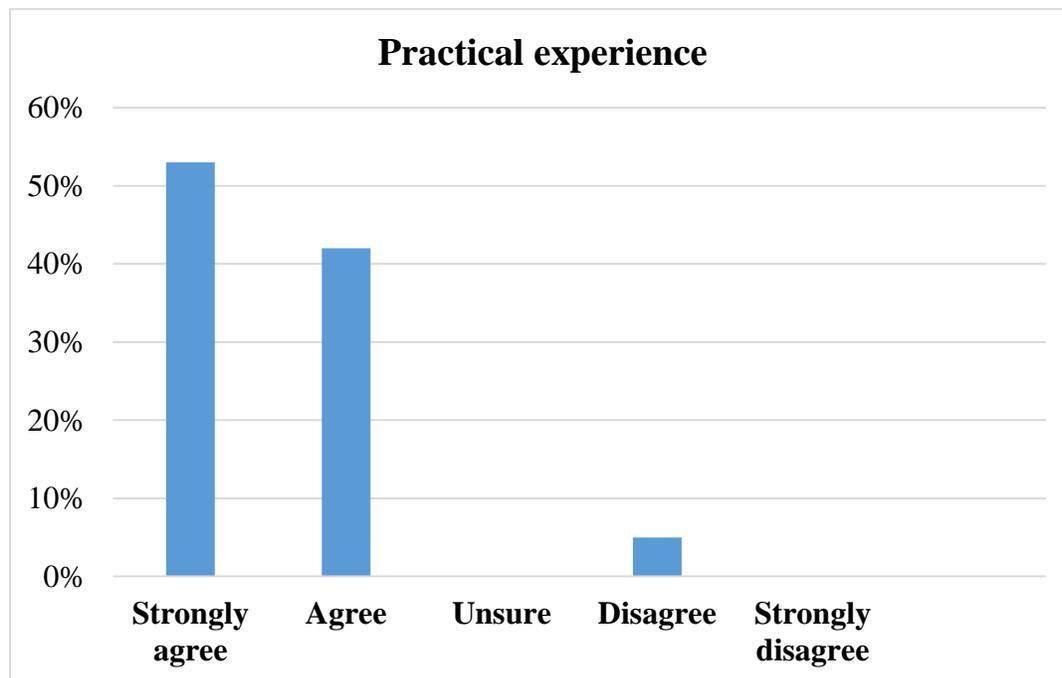


Fig 4.11 above shows that 10 respondents (53%) strongly agree, 8 (42%) agree and 1 (5%) disagrees that practical experience has an impact on the ability of forensic auditors to detect fraud. 95% of the respondents therefore agree that the higher the practical experience the higher the effectiveness of forensic audit. Peter et al. (2014) and Soltani (2014) showed that upgrades in the Information Communication Technology world required forensic auditors with great experience and computer abilities to identify extortion. Soltani (2014) proceeds to reveal that lower level auditors are more frequently vulnerable to zones of the audit that show extortion but since they lack understanding and information about fraud, they fail to identify fraud when it is happening prompting the entire group being wasteful. As indicated by Nunn et al. (2017) the most significant ability is down to earth experience increased through developing in the profession and furthermore the experience of dealing with complex fraud cases in law enforcement for quite long offers priceless information. Complaints from the staff engaged in the forensic audit indicated that they took more time than expected due to lack of practical business experience in the forensic field, Staff Reports (2019). Annual Progress Report (2019) also recommended the firm establishes a fully functional forensic department with experienced people if provision of forensic services is to be effective.

On the other hand, 5% of the respondents disagree that practical experience influences forensic audit's effectiveness. Oyedokun (2015) posited that experience only is not enough but forensic auditors require further training and education and advancement so as to be aware of any changes of the surrounding environment. In conclusion it was found that the level of practical experience significantly influences the effectiveness of forensic audit as 95% of the respondents agree that indeed it does. The firm should employ qualified personnel and also consider their work experience as this is vital in increasing the effectiveness of forensic auditors.

4.2.4 Is there a significant difference between external auditors and forensic auditors?

Table 4.2: Response on the difference between external and forensic auditors.

Differences	Number of respondents
The two auditors have different objectives, the forensic auditor looks to detect fraud whilst the external seeks to give reasonable assurance.	10
Forensic auditors carry a 100% audit whilst external auditors carry out their audits on a sample basis.	4
Different knowledge and skill levels.	3

Table 4.2 above shows that 17 out of 19 respondents (89%) agree that there is a difference between external auditors whilst 2 out of 19 respondents (11%) do not agree. This was an open ended question and various reasons were given as to why there were differences or not. 10 respondents (53%) indicated that it was because of the differences in their objectives. On the other hand 4 respondents (21%) revealed that it was as a result of the scope of the audit that whereas external auditors carry out their audits on a sample basis forensic auditors carry out theirs on a 100% basis. 3 respondents (15%) indicated that the difference was as a result of knowledge levels.

Moreover 89% of the respondents agree that there is a difference. The Annual Progress Report (2019) indicated that the decrease in the external audit clientele base from 80 clients to 74 clients in 2019 was as a result of having invested so much time and external audit personnel in the forensic audit engagement accepted in 2019 such that the external audit department was understaffed and unable to meet deadlines for the other clients. Engaging with external auditors in a forensic engagement is an issue as indicated by Okoye and Gbegi (2014) who are of the thought that there is a noteworthy contrast between external and forensic auditors as external auditors do not or might not have sufficient abilities to handle modern fraud like clerical violations, for example, security frauds and misappropriation.

However 2 respondents (11%) indicated that there were no differences as both auditors were capable and necessary for the detection of fraud. This view was supported by Nwanko (2014)

who indicated that external and forensic auditors are of paramount importance as they both play a retrospective control of the financial information with a goal of identifying fraud. In conclusion it is only reasonable that the researcher concludes that there is a significant difference between external and forensic auditor because 89% of the respondents backed by all 3 interview respondents agree that there is a difference. PKF could train its external auditors in the field of forensics, arrange training and development programs and even help them acquire additional courses with regards to the forensic field such that there is not much difference between the two types of auditors as both can effectively carry out forensic audits.

Table 4. 2: Data analysis using the multiple regression method

Variable	Coefficient	Standard Error	Probability
Constant	.4755385	1.247921 0.38	0.710
Training	.1974458	.4289491 0.46	0.654
Resource	-.2374163	.4118295 -0.58	0.576
Education	.3798853	.2877622 1.32	0.214
Experience	-.3208869	.3291069 -0.98	0.351
Financial Investigation	-.1987186	.2590068 -0.77	0.459
Litigation	.1095899	.2340503 0.47	0.649

Source: Stata 11.2

R-squared 0.4827

The regression model will be as follows

$$\begin{aligned}
 \text{Fraud Dctn} = & 0.4755385 + 0.1974458Tr - 0.2374163Res + 0.378853Edu \\
 & - 0.3208869Exp - 0.1987186Fin + 0.1095899Lit
 \end{aligned}$$

The model is significant in explaining the effectiveness of forensic auditing in detecting fraudulent activities at 5% level of significance. The R-Squared of 0.4827 shows that the logarithm of fraud is explained by the logarithms of training, availability of resources, education, experience, financial investigation and litigation. There is a positive relationship between training and the ability to detect fraud, hence a 1% increase in training leads to an increase in ability to detect and prevent fraud. In the model, there is a positive relationship between fraud

detection and level of education. This specifically implies that on average adding 1% on the education brings about a 38% increase in the ability to detect and prevent fraud. More so, there is a positive relationship between fraud detection and litigation. This specifically indicates that on average adding 1% on the litigation brings about an 11% increase on ability to detect fraud. According to the model financial investigation, availability of resources and experience have a negative relationship with fraud detection. This means an increase in resources and experience does not guarantee an increase in ability to detect fraud.

4.3 Chapter Summary

This chapter provided an analysis and presentation of the data collected by the researcher with regards to objectives of the study. The next chapter will give a summary of chapter one to four and also provide recommendations and point out areas that may need further study.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter focuses on summarizing the previous chapters taking into consideration areas of main focus in each chapter. It also summarizes based on the objectives and research questions. The study sought to investigate the effectiveness of forensic audit as a tool for fraud detection and prevention. Recommendations will also be made by the researcher and areas of further study pointed out.

5.1 Chapter summaries

Chapter one

Chapter one gave a brief background of PKF Chartered Accountants and gave a 3year analysis of factors that led the researcher to carry out the research. The chapter also introduced the research topic, an investigation on the effectiveness of forensic audit as a tool for the detection and prevention of fraudulent activities. A number of scholars who carried out a similar research were noted and majority of them agreed that forensic audit was effective in the detection of fraudulent activities whilst only a few disagreed. The researcher therefore identified a research gap and indicated that focus of the study was going to be on the impact of knowledge, skill, resources and experience on the effectiveness of forensic audit in the detection and prevention of fraud since the previous researches had overlooked that area. Four research objectives were established and they were achieved through answering 4 research questions which were linked to the objectives. The most used terms in the research, that is, forensic audit and fraud were defined. Limitations and delimitations encountered in the study were mentioned and how they affected the study.

Chapter two

The main objectives were further broken down into sub objectives and each and every one of them critically analyzed. Chapter 2 focused on ways of improving forensic auditing and these included more training and use of professionals in forensic engagements as the challenges identified in this chapter included lack of knowledge and training as well as technological challenges which required skilled personnel. How litigation support services have a role to play in the effectiveness of forensic auditing was also exhausted in this chapter. With regards to

litigation support if data gathered cannot be used in a court of law to settle ongoing financial and business related disputes the forensic audit carried out is said to be ineffective. Focus was also placed on factors which led to growing relevance of forensic auditing and amongst these were failure of external auditors and internal auditors to detect fraud. These factors were linked in the sense that the whole failure goes back to management as external auditors fear exposing the management which is responsible for their contract. The same management has influence over the internal auditors therefore by limiting their audit scope fraud cannot be detected and prevented as they are also responsible for efficiency of the internal control system. This was done to ensure that the researcher was well equipped with already existing knowledge in relation to the effectiveness of forensic audit as a tool for the detection and prevention of fraudulent activities.

Chapter three

This chapter placed emphasis the research methodology which was used in the collection of relevant data. In this study on the effectiveness of forensic audit as a fraud detection and prevention tool data was gathered from PKF Chartered Accountants, an audit firm used as the case study. The research made use of the combined approach and primary data which was gathered using interviews and questionnaires. The approach was mixed as it incorporated questionnaires with a section A which presented quantitative data in form of closed ended questions quantified using a Likert scale. Section B of the questionnaire presented qualitative data in the form of open ended questions and interviews were also carried out to provide qualitative data. From a target population of 70 auditors a sample of 23 respondents was selected using random sampling which presented an equal chance of participation to all elements of the total population. The researcher also indicated that the multiple regression model was used for analyzing data and for presentation of data pie charts, bar graphs, column graphs and tables were used.

Chapter four

In chapter four the examination discoveries from chapter three were introduced for investigation. The discoveries were exhibited question by question in the manner they were asked in the questionnaires as well as interview guide. Information was introduced in pie outline, tables and bar graphs and explanations given below.

5.2 Major research findings

5.2.1 Factors influencing the effectiveness of forensic auditing in the detection of fraud.

This study established that training and level of education have a positive impact on the effectiveness of forensic auditing. That is to say the more the auditors are trained in the field of forensics the better the quality of forensic auditing service offered. The higher the level of education possessed by an auditor the more effective the forensic audit service offered. This relationship was further strengthened by the multiple regression analysis which proved that as each of these factors increases fraud levels decrease.

5.2.2 Difference between external auditors and forensic auditors.

The study also unearthed that there is a significant difference between the two types of auditors, that is, the forensic auditor and the traditional auditor. However the traditional auditor can still carry out a forensic audit even though it may be a struggle due to issues of knowledge and expertise. Consequently the attributes possessed by the forensic auditors are still required to detect fraud making the forensic auditor the right candidate to carry out forensic engagements for purposes of effectiveness. These include education, knowledge and training which play a vital role in the effectiveness of forensic audit.

5.2.3 The effectiveness of forensic audit as a fraud detection and prevention tool.

The research found that litigation support is of paramount importance in the prevention and detection of fraud. It discourages unethical conduct within an organization hence preventing questionable activities. However the research revealed that the success of litigation in curbing extortion depends on the quality of information presented before the court. A combination of information gathered by the forensic auditor that can be introduced in a court of law in order to settle ongoing financial disagreements at the same time providing litigation support service forms the whole package of an effective forensic audit.

5.3 Conclusion

The researcher concluded that improved training, more practical expertise, more knowledge and skill as well as adequate resources have a positive impact on the effectiveness of forensic auditing as a fraud detection tool. The more these factors are put into practice at PKF Chartered Accountants, the higher the effectiveness of its forensic auditing service in fraud detection.

5.4 Recommendations

- In order to boost the effectiveness of forensic auditing PKF Chartered Accountants should include forensic audit training sessions in its training calendar for the year as study revealed that training has a positive impact on the effectiveness of forensic audit. This could also be achieved through attending other training and development programs.
- The firm should also establish a fully functional forensic audit department with adequate resources required by forensic auditors as the employees indicated that lack of resource is an inhibiting factor.
- The firm should also consider recruiting professional forensic auditors as knowledge and skill of the auditor is also a contributing factor towards the effectiveness of forensic auditing. The skilled professionals can also assist in training the junior auditors therefore improving the quality of the service.

5.5 Areas for further study

The research suggests future studies to look at the impact of forensics on organizational performance. As unearthed in this research management have been reluctant to engage forensic auditors as they have overlooked their importance. It is important to see how it affects the profitability of companies.

5.6 Chapter Summary

This chapter gave a rundown of all the chapters in the dissertation. It moreover clarified the major discoveries of the research. Recommendations to PKF Chartered Accountants were made and zones of advancement clearly expressed. Areas for further study were also highlighted in this chapter.

REFERENCE LIST

1. Abdi, A. (2017). 'The impact of Forensic Auditing services on fraud detection among commercial banks in Kenya' *Journal of Economics and Finance*, 96(1), pp. 67-80.
2. Abdul, B. (2018). 'Fraud prevention in private sector organizations.' *International journal of economics and business management research*, 2(1), 15-27.
3. Abdullahi, A., Maarof, M. and Zainal, A. (2016). 'Fraud detection system: A survey.' *Journal of Network and Computer Applications*, 68(2), 90-113.
4. Abdullahi, R. and Mansor, N., (2015). 'Concomitant Debacle of Fraud Incidences in the Nigeria Public Sector: Understanding the power of fraud triangle theory'. *International Journal of Academic research in business and social sciences*, 5(5), pp.312-326
5. Aborbie, S. (2015). 'Narrowing the gap of financial fraud detection in corporations. Waldern doctoral studies.' *Journal of accounting commons and the finance and financial management commons*, 12 (1), 45-62.
6. Adebisi, J. F, Gbegi, D.O. (2015) 'Fraud and the Nigerian Public Sector Performance The Need for Forensic Accounting' *International Journal of Business, Humanities and technology*, 5(5), 95-109.
7. Adeidre, T. O. (2016). 'Relationship between forensic accountants' competences and expectation gap: Evidence from Nigeria money deposit banks : Jomo Kenyatta University of Agriculture and Technology
8. Agbaje, W. (2017). 'Effects of forensic auditing services on fraud reduction in the Nigerian banking industry' *Advances in Social Sciences research journal*, 4 (12), 33-56.
9. Agbaje, W., Busari, G. and Adeboye, N. (2014). 'Effects of accounting information management on profitability in Nigerian Banking Industry' *International Journal of Humanities, Social Sciences and Education*. 1 (9), 100-105.
10. Agrawal, A. and Cooper, T. (2017). 'Corporate governance consequences of accounting scandals: Evidence from top management, CFO and Auditor turnover' *Journal of finance*, 1(5), 24-56.
11. Aigienohuwa, O. O, Okoye, E. I., Uniamikobgo, E. (2017). 'Forensic accounting and fraud mitigation in the Nigerian banking industry' *International Accounting and Taxation Research group*, available online at <http://www.atreview.org>, accessed on 10 January 2020.

12. Ajomele, D. (2015). 'Fraud and corruption' *South African Institute of Corporate fraud management*, 4-8.
13. Akelola, S. (2015). 'Prosecuting bank fraud in Kenya: Challenges faced by the banking sector' *Journal of finance and management in the public sector*. 14(1) 60-78.
14. Akenbor, C. O. (2014), C. O. (2014) 'Forensic auditing techniques and fraudulent practices of public institutions in Nigeria' *Journal of modern accounting and auditing*, '4(10), 43-64.
15. Akomolafe, J. A. et al. (2017). 'Financial crime in Nigeria Public Sector: a study of Lagos State Ministries' Ogun Institute of Technology, Ogun State, Nigeria.
16. Alabdullah, Y. T. T. et al. (2014). 'The role of forensic accounting in reducing financial corruption' *International journal of business and management*, 9(1), 96-105.
17. Alao, A. (2016). Forensic audit and financial fraud in Nigerian Deposit Money banks (DMBS). *European journal of accounting auditing and financial research*, 4(8), 1-19.
18. Albretcht, S. (2014). 'Iconic fraud triangle endures: metaphor diagram helps everybody understand fraud' *Fraud magazine*, 3-7.
19. Ali, I. (2017). 'The effect of internal audit on financial performance on microfinance institutions in Kenya'. *International journal of business and management*, 2(3), 4-10.
20. Asare, S. K. and Wright, A. M. (2014). 'The effectiveness of alternative risk assessment program and planning tools in a fraud setting' *International journal of business and management*, 1(2), 23-37.
21. Augustine, E. and Uagbale-Ekatak, R. (2014). The growing relevance of Forensic Auditing as a tool for combating fraud and corruption: Nigeria experience. *Research journal of finance and accounting*. 5 (2), pp 71-77.
22. Ayodele, J. (2014). 'Reflection of economic and financial crime commission. (EFCC): Corruption and the use of plea bargain in Nigeria' *Journal of management sciences and humanities*. 2 (1), 55-68.
23. Basseyy, E. B. (2018) 'Effect of Forensic Accounting on the management of fraud in microfinance institutions in Cross River State' *Journal of Economics and Finance (IOSR-JEF)*, 1(1), 2-9.
24. Biddix, P. J. (2015). 'Strategies for assessing computer students: 199-2017' John Wiley and Sons.

25. Boateng, A., Boateng, G. and Acquah, H., (2014). 'A literature review of fraud risk management in microfinance Institutions in Ghana' *Research Journal of finance and accounting*, 5(11), 17-39.
26. Bosse, D. and Phillips, R. (2016). 'Agency theory and bounded self-interest' *Academy of management review*. 41 (2), 276-297.
27. Brinkman, A. (2014). 'Finance ethics: Critical Issues in theory and practice', New Jersey, New York: John Wiley and Sons
28. Creswell, J. W. (2014) 'Finance ethics. Research design: qualitative, quantitative and mixed method approaches' Second edition. Sage.
29. Dada, O. S. (2014). 'Forensic auditing technique: A means of successful eradication of corruption through fraud prevention, bribery prevention and embezzlement prevention in Nigeria' *Kuwait chapter of the Arabian Journal of business management and economic research*. 4 (1), 125-142.
30. Dellaportas, S. (2014). 'The effect of a custodial sentence and professional disqualification on re-integration' *Critical perspective on accounting journal of business ethics*. 83, 133-146.
31. Denzin and Lincoln, Y. (2014). 'Introduction: Entering the field of qualitative research' *Handbook of qualitative research*. London: Sage publications.
32. DeZoort, F. and Harrison, P. (2018). 'Understanding auditor's sense of responsibility for detecting fraud within organizations' *Journal of business ethics*. 149 (4), 857-874.
33. DiNapoli, T. P. (2016). 'Red flags for fraud' State of New York Office of the State Comptroller.
34. Egbunike, A. and Ekofo, G. (2017). Audit firm attributes and bank failures in Nigeria.
35. Ehioghira, E. E. and Atu, O. (2016). 'Forensic Auditing and fraud management evidence from Nigeria' *Igbinedion University Journal of Accounting*, 2, 248-308.
36. Ekiti, A. (2017). 'The roles of auditors in fraud detection and prevention in Nigeria Deposit Money Banks: Evidence from Southwest' 79-88.
37. Enofe, A. O., Ekpulu, G. A., and Ajala, T. O. (2015). 'Forensic Accounting and corporate crime mitigation' *European scientific journal*, 11(7), 167-180
38. Enofe, A. O., Olorunnuho, M. S. and Okporua, A. O., (2016) 'Forensic audit and fraudulent financial reporting in Nigeria' *Journal of accounting and financial management ISSN 2504-8856*, 2(1), 45-67.

39. Enofe, O. A., Omagbon, P., Ehiglator, I. F, (2014) 'Forensic audit and corporate fraud' *International journal of Economics and Business Management*, 1(7), 17-22.
40. Eyisi, A. and Agbaeze, E. (2014). The impact of Forensic audit in corporate governance. *International journal of development and sustainability*. 3(2), 404-417.
41. Ezejiofor, R. A., Nwakonu, P. N. and Okoye J. F. (2016). 'Impact of forensic accounting on combating fraud in Nigerian banking industry' *International journal of Academic Research in Management and business I (1)*, 1-19.
42. Fazli, S. A., Mohd T. I., and Mohamed M. Z., (2015). 'Fraud Risk Factors of Fraud Triangle and the likelihood of fraud occurrence: Evidence from Malaysia' *Information Management and Business Review*, 6(1), 1-7.
43. Gbegi, D. O., Adebisi, J. F. (2015) 'Fraud' *Journal of Good Governance and Sustainable Development in Africa (JGGSDA)*, 2(4), 45-60.
44. Gill, J. (2017). 'The fraud triangle on trial' *Journal of financial crime*. 21 (5). 419-421.
45. Gregory, R. (2015). 'Political independence, operational impartiality and the effectiveness of anti-corruption agencies' *Journal of Asian education and development studies*. 4 (1), 125-142.
46. Gupta, A. K., (2014). 'A conceptual JIT Model of service quality' *International Journal of Engineering Science and Technology*, 2214-2227.
47. Haniffa, R. and Hudaib, M. (2014). 'Locating audit expectations gap within a cultural context: Case of Saudi Arabia' *Journal of Accounting and Auditing and Tax* 16.
48. Huber, D. (2017). 'Forensic Auditing, Fraud Theory and the end of the fraud triangle' *Journal of theoretical accounting research*. 12 (2), 28-42.
49. Ibrahim, A. Mohammed, D, Fatima, U. (2014). 'Managing bank fraud and forgeries through effective control strategies: A case of central bank of Nigeria, Gombe Branch.' *International Journal of Business Management invention*. 3 (4), pp 7-17.
50. Idowu, E., Ighosewe, F. and Nkechi, T. (2016). 'Relationship between corporate governance and fraud prevention in Nigeria.'
51. Igbaekemen, G., Abbah, M. and Geidam, M. (2014). 'The effect of corruption on socio-economic development in Nigeria' *Canadian Social Science*. 19 (6). 149-157.
52. Ijeoma, N. B., (2014). Bridging the expectation gap in auditing. *International journal of Technology and Engineering research*. 2(5), 120-127

53. Iyer, N. and Samociuk, M. (2016). 'Fraud and corruption: Prevention and detection' *Routledge*, 33-40.
54. Jizi, M. and Nehme, R. (2018). 'Board monitoring and audit fees: the moderating role of the CEO/ chair dual roles' *Managerial auditing journal*. 33 (2), 217-243.
55. Jonathan, A., and Osasumwen, O. (2014). 'Effectiveness of the application of Forensic Accounting Services in Nigeria Corporate Organizations' *AAU JMS I (1)*, 1.
56. Jose, U. (2014). 'Transparency International: Corruption Perception Index Report' *The expectation gap in auditing managerial auditing journal Vol 13 (3)*.
57. Kabue, N. (2015). 'The effect of internal controls on fraud detection and prevention among commercial banks in Kenya' *Journal of emerging trends in economics and management sciences*. 3 (3), 191.
58. Knezevic, G. (2015). 'The characteristics of forensic audit and differences in relation to external audit' *FINIZ 2015- Contemporary Financial Management*, 202-205.
59. Kolbaek, R. (2014) *Research Designs – Lecture for WIP 2014 IRIS Network*.
60. Kumar, R. (2014) *Research methodology: A step-by-step guide for beginners*. Sage Publications Limited.
61. Lanza, R. B., Gilbert, S. and Lamoreaux, M. (2014). 'A risk based approach to journal entry testing' *Journal of an accountant*, 20, 19-23.
62. Lawal, B. A. (2017) 'Effect of cost control and cost reduction techniques on performance' *International business and management journal*, 14(3), 19-25.
63. Lin, Y. (2014). 'Corporate governance, leadership structure and CEO compensation: evidence from Taiwan' *An international review journal*, 13(2), 5-8.
64. Lokanan, M. (2014). 'How senior managers perpetuate fraud? Lessons for fraud examiners from an instructional case' *The journal of financial crime*, 21 (4), 411-423.
65. Lokanan, M. (2015). 'Challenges to the fraud triangle: Questions on its usefulness' *Accounting forum*, 7-8.
66. Lokanan, M. (2017). 'Theorizing financial crimes as moral actions, European accounting review' *The journal of financial crime*, 23(2), 579-592.
67. Macdonald, C. (2015) 'Managing the dilemma of balancing revenue growth and cost containment' University of Pretoria.

68. Magali, J. J., and Qiong, Y. (2014). 'Commercial banks vs rural SACCOS Credit Risk Management practices in Tanzania' *Journal of Economics and sustainable development*, 5(2), 42-51.
69. Manas, C. (2014). 'Problems and prospects of Forensic Auditing profession in India' *Journal of informative and futuristic research*. 2(1), 1-9.
70. Mansor, N. (2015). 'Fraud triangle theory and fraud diamond theory. Understanding the convergent and divergent for future research' *International journal of academic research in accounting. Finance and Management sciences*. 1, 38-45.
71. Mau, K. (2015). 'The role of Forensic investigation professionals in the prevention of fraud and corruption in developing countries' *International journal of corruption in developing countries*,2, 1-11.
72. Mau, K. K. (2015). 'The role of forensic investigation professionals in the prevention of fraud and corruption in developing countries' 1-11.
73. Maulidi, A. (2016). 'Dealing with fraudulent financial statements in business organizations through the whistleblowing system and staff awareness of fraud.' *Proceedings of the international conference on accounting studies (ICAS)*. 324-331.
74. McWilliams, J. M. (2016) 'Cost containment and the Tale of Care co-ordination' Massachusetts Media Society: England.
75. Miles, M. B. and Huberman, A. M. (2014) *Qualitative data analysis an expanded sourcebook*. London Sage Publications.
76. Molina, Y. and Camion, R. (2014). *Application of mixed research methods in organizational*. International journal.
77. Morales, J., Gendron, Y. and Guenin-Paracini, H. (2014). 'The construction of risky individual and vigilant organization' *A genealogy of the fraud triangle*, 1-5.
78. Mukoro, D. O., Yamusa, O., and Faboyede, O. S. (2014). 'The role of forensic auditing in fraud detection and national security' *BVIMSR's Journal of management research*, 5 (1), 40-47
79. Muriithi, J., Mwikamba, T. and Rossana, D. (2016). Effectiveness of corporate governance on detection of accounting fraud within Kenyan universities. *International journal of social sciences and Information Technology*,2(6), 41-55.
80. Muthusamy, G. (2016). 'Behavioral intention to use forensic accounting services for the prevention and detection of fraud by large Malaysian companies' 89-105.

81. Mutua, C. (2014). 'The effect of fraudulent activities on the growth of insurance companies in Kenya' *Journal of management* 2 (16), 301-317.
82. Ng'ang'a J. K. (2015). 'The effect of Forensic Auditing services on fraud prevention in insurance companies' *International journal of business and social sciences*, 4 (9), 123-132.
83. Nipion, S. (2015). 'Bank Fraud and the Nigerian Economy: A psycho-economic analysis' *Journal of Social Science and Humanities*. 1(1), 30-36.
84. Njanike, K., Dube, T. and Mashayanye, E. (2014). 'The effectiveness of Forensic Auditing in detecting, investigating and preventing bank frauds' *Journal of sustainable development in Africa*. 10(4), 405-425.
85. Nunn, L., Mcguire, B., Whitcomb, C. and Jost, E. (2017). 'Forensic Accountants: Financial Investigators' *Journal of Business and economics research*. 4 (2), 1-6.
86. Nwanko, O. (2014). Impact of corruption on economic growth in Nigeria ' *Mediterranean journal of sciences* ' 5(6), 41-46.
87. Odelabu A. T. (2014). 'Effects of forensic accounting on the financial performance of commercial banks in Nigeria' *Journal of Finance and accounting*, 5(8), 65-79.
88. Odunayo, B. (2014). 'Fraudulent financial reporting: The Nigerian experience The Clute Institute International Conference' San Antonio Texas, USA, 18-30.
89. Okolie, A. and Taiwo, A. (2014). 'The application of Information Technology to forensic investigations in Nigeria' *Journal of sustainable development in Africa*, 10(6), 460-490.
90. Okoye and Gbegi (2014). 'Forensic auditing: A tool for fraud detection and prevention in the public sector' *International journal of academic research in business and social sciences*, 3(3), 37-46.
91. Olaoye, C. and Dada, R. (2014). 'An analysis of frauds in banks: Nigeria's experience' *European journal of business and management*. 6 (31), pp 90-99.
92. Olube, M., Ayoib, C. and Rose, S. (2014). 'The impact of Task Performance Fraud Risk Assessment of Forensic Skills and Mindsets: Experience from Nigeria' *International journal of Business and Social Science*. 5(9), 66-72.
93. Omar, N. and Bakar, K. (2014). 'Fraud prevention mechanisms of Malaysian government-link companies. An assessment of existence and effectiveness.' *Journal of modern accounting and auditing ISSN 1548-6583*. 8 (1), 15-31.

94. Onodi, B. E. Okafor, T. G. and Onyali, C. I. (2015). 'The impact of forensic investigative methods on corporate fraud deterrence in banks in Nigeria European' *Journal of Accounting Auditing and Finance Research* 3 (4), 69-85.
95. Osunwole, O., Adeleke, K. and Henry, P. (2015). 'Forensic accounting: An antidote to fraud in Nigeria money deposit banks' *International journal in management and social sciences*. 3(4), 32-42.
96. Oyedokun, G. (2017). 'Forensic auditing techniques, tax justice and federally collected tax revenue in Nigeria' 2000-2016.
97. Oyedokun, G. and Akinwumi, O. (2018). 'Forensic auditing skills and corruption eradication in Nigeria' 66-68.
98. Oyedokun, G. E. (2014). 'Forensic accounting and investigation: A means of curbing money laundering activities' *Being a paper delivered at the Nigerian students' economic and financial summit (NISEF) 2014, of Obafemi Awolow University's chapter of the Nigeria University Accounting Student's Association*.
99. Pany. O. W. (2014) *Principles of auditing and other assurance services*, New York: McGrawhill.
100. Peter, M. Aliyu, D. E., Ebong Inyang, G., Abba Ogere, Z. (2014) 'Application of forensic auditing in reducing fraud cases in Nigerian money deposit banks' *Global Journal of Management and Business Research*, 14 (3), 17.
101. Petrascu, D. and Tleanu, A. (2014). 'Role of internal audit in fraud prevention and detection' *Journal of Economics and Finance* 16, 489-497.
102. Popoola et al. (2014). 'Forensic accounting and fraud capability and competence requirements in Malaysia' *Journal of modern accounting and auditing*. 10(8), 825-834.
103. PKF Annual Progress Reports (2017-2019).
104. PKF Staff Report (2019).
105. PKF Training Logbook (2017-2018)
106. PKF Report to management ()
107. Rahman, R. A., Anwar, I. S. K., (2014) 'Effectiveness of fraud prevention and detection techniques in Malaysia Islamic Banks' *Journal of Social and Behavioral Sciences*, 145, 97-102.

108. Ramadan, S. (2015). 'Certified accountants' perceptions of forensic accounting education: The case of Bahrain' *International journal of finance and accounting*. 4 (2), 109-118.
109. Rohana, O., Noorashinda, A. A., Amun, M., Norhasliza, Z. and Naralina, M. A. (2015). 'Fraud detection and prevention methods in the Malaysian Public Sector: Accountants' and internal auditor's perceptions' *Journal of economics and finance* 28, 59-67
110. Saunders (2017). *Research methods of business Students, 8th edition*, Hallow England.
111. Schuchter, A. and Levi, M. (2016). 'The fraud triangle revisited' *Security journal*. 29 (2), pp 107-121.
112. Seitz, J., Oeding, J. and Wiese, m. (2015). 'Is it ethical for the US government to offer financial awards to potential whistleblowers of financial statement fraud and internal controls violations?' *Journal of Theoretical accounting research*. 10(2), 68-90.
113. Sharma, G., (2017). 'Pros and Cons of different sampling techniques' *International Journal of Applied Research*, 3 (7), 749-752.
114. Sikka, P. (2015). 'The corrosive effects of neoliberalism on the UK financial crisis and auditing practices: A dead end for reforms' *Accounting forum*. 39 (1), 1-18.
115. Singh, A. S. and Masuku M. B. (2014), 'Sampling techniques and determination of sample size in applied statistics research: An overview.'
116. Smith, G. and Crumbley, D. (2014). 'Defining Forensic Accounting' *Journal of Digital Forensic, Security and Law*. 4 (1), 61-80.
117. Soltani, B. (2014). 'The anatomy of corporate fraud: A comparative analysis of high profile American and European Corporate Scandals' *Journal of business ethics*, 7.
118. Sukamal, B. (2014). Forensic auditing in the cyber world: A new challenge for accountants. *The management accountant*. 49 (9), pp 18-23.
119. Sullivan, F. and Artino, M. (2018). 'Research methods in Accounting' *Sage Journal*, 1, 5.
120. Sutan, E. and Abdullah, H. (2015). 'Forensic accounting education in Bahrain: A survey on educator's opinion' *International journal of pedagogical innovations*. 3 (1), 7-16.
121. Taylor, J. E., Dossick, C., and Garvin, M. (2014). 'Meeting the burden of proof with case study research' *Journal of construction Engineering and Management*, 137, 303, 311.

122. Tricker, B. and Tricker, I. (2015). 'Corporate governance: Principles, policies and practices' Oxford University press, USA.
123. Umar, I., Samsudin, R. and Mudzami, M. (2016). 'Adoption of forensic accounting in fraud detection process by anti-corruption agency a conceptual framework' *International Journal of management research and review*. 6(5), 139-148.
124. Uwalomwa, U., Ranti, U., Kingsley, A. and Chinenye, A. (2016). 'Tax incentive and growth of manufacturing firms in Nigeria' *The social sciences medwell journals*, 1338-1342.
125. Wells, J. T. (2014). *Principles of fraud examination*. London: John Wiley and Sons.
126. William, M. T., (2017). 'Research Methodology and Model Base' *International Journal*, 1, 5-6.
127. Wyse, E. S. (2014). Advantages of the face to face data collection method.
128. Yego (2016). 'Impact of fraud in the banking industry.'
129. Zhaol, N., Yen, D. and Ghang, I. (2014). 'Auditing in the E-commerce era' *Information Management and Computer Science*. 12 (5), 389-400.

APPENDIX 1 – REQUESTING LETTER



THE MIDLANDS STATE UNIVERSITY
FACULTY OF COMMERCE
DEPARTMENT OF ACCOUNTING



PKF Chartered Accountants

67 Kwame Nkrumah Av

8th Floor Takura House

Harare

Dear Sir

Re: Request for approval to conduct a research on the effectiveness of forensic as a tool for fraud detection and prevention.

My name is Diana Eleanor Mulonda and I am a final year student at Midlands State University studying for a Bachelor of Commerce Honors Accounting Degree. I am seeking your permission to conduct my research on, 'The effectiveness of forensic audit as a tool for fraud prevention and detection: A case study of PKF Chartered Accountants.' This is in partial fulfillment of the requirements of my degree program. The information gathered shall be used for academic purposes only and shall be confidential.

Your response will be greatly appreciated.

Yours faithfully

Diana Eleanor Mulonda.

APPENDIX 2
QUESTIONNAIRE

My name is Diana Eleanor Mulonda. This study is a requirement for the partial fulfillment of a Bachelor of Commerce Honors Accounting Degree. The purpose of this research is to investigate the effectiveness of forensic audit as a tool for the detection and prevention of fraudulent activities. Please note that any information you will give will be treated with confidentiality and at no instance will it be used for any other purpose other than for this project. Your assistance will be highly appreciated. I look forward to your prompt response.

Section A

Instructions for completion

Tick in the appropriate box

1) **Male**

2) **Female**

1	2	3	4	5
Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree

2) The following circumstances perpetrated the need for forensic auditing services?

	1	2	3	4	5
Failure of external auditors to detect fraud					
Failure of internal auditors to detect fraud					
Weak or absence of internal controls					
Failure of management and those charged with governance to carry out their duties with regards to fraud.					

3) Forensic audit is an effective tool in the detection and prevention of fraudulent activities based on its ability to;

	1	2	3	4	5
Detect fraud					
Provide evidence that is admissible in a court of law					
Carry out financial investigations and resolve disputes					

4) The following factors influence the effectiveness of forensic audit in the detection and prevention of fraudulent activities?

	1	2	3	4	5
Training					
Availability of resources					
Knowledge and level of education					
Practical experience					

Section B

Instructions for completion

Please fill in your responses in the blank spaces

1) Are there any significant differences between a traditional auditor and a forensic auditor? If yes please list them

.....

2) Any recommendations on how the firm could possibly improve its forensic auditing services?

.....

The end

Thank you

APPENDIX 3
INTERVIEW GUIDE

Interview guide

- 1) Can forensic audit be relied on as an antidote in the event that fraudulent activities exist based on its ability to provide litigation support and solve business disputes?
- 2) Do you agree that training, knowledge, skill and resources have a role to play in the effectiveness of forensic audit?
- 3) Is there a significant difference between external and forensic auditing?
- 4) Do you agree that the failure of management, internal auditors, internal controls and traditional auditors to detect and prevent fraud led to the birth of forensic audit?

APPENDIX 4

REGRESSION ANALYSIS DATA

resources	education	experience	training	litigation	financial investigation
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	2
1	1	1	1	2	2
1	1	1	1	2	2
1	1	1	1	2	2
1	1	1	1	2	2
1	1	1	1	2	2
1	1	1	1	2	2
1	1	1	1	2	2
1	2	2	2	2	2
2	2	2	2	2	2
2	2	2	2	4	2
2	2	2	2	5	2
2	2	2	2	5	2
2	4	2	2	5	4
2	4	2	2	5	4
2	4	2	2	5	4
4	4	4	4	5	4