

**FORENSIC ACCOUNTING AND FRAUD CONTROL IN COUNTY  
GOVERNMENTS IN KENYA: EVIDENCE FROM COUNTIES IN MT.  
KENYA REGION**

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## DECLARATION

This thesis is my original work and has not been submitted in the same form to this or to any other university or institution for any award.

Sign..... Date.....

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This thesis has been submitted for examination with approval of the supervisors.

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## **DEDICATION**

I dedicate this thesis to my spouse Mercy Kathure, son Emmanuel Gitonga, my parents and siblings. Your love cannot be quantified. God bless you.

## **ACKNOWLEDGEMENT**

This thesis would not have been possible without the efforts of a number of people whose great contribution made a difference and strengthened me when researching. I wish to extend my sincere gratitude's, to my supervisors Dr. Gillian Mwaniki and Prof. George King'oriah for their time, advice and guidance they accorded me, during the dissertation. I am indebted to my lecturers, in the Department of Accounting & Finance, Kenya Methodist University (KeMU) who impacted the knowledge to me during the course of my PhD programme. I appreciate the management of KeMU for allowing me to achieve my dream. To my colleagues, your support was immeasurable. I congratulate my PhD Class of 2016 for the abundant consultations and acumen that helped me streamline my dissertation. Special thanks to Dr. John Karanja and Newton Kiogora for valued guidance and encouragement throughout the research. I will forever be grateful to my research respondents for the time they took filling my Questionnaires and their willingness to give me the vital information that was necessary for the study. Devoid of this generosity, my dissertation would have remained a dream. Lastly I owe all these to the Almighty God for giving me health, wisdom and knowledge that enabled me do this work.

## ABSTRACT

In the 21st century fraud is becoming an issue that top management of many organizations is struggling to control. Globally most companies do not admit they are vulnerable to fraud. Studies have shown that fraud can occur internally or externally and may involve employees, client or other relevant stakeholder's in an organization. The result of past studies indicates that fraud can occur amidst policies, tools and models that have been put in place. In Kenya fraudulent acts have been witnessed almost in the entire sectors of economy. The purpose of the current study was to investigate and come up with conclusive results on how policies on forensic accounting, fraud management tools, degree of awareness on methods of forensic accounting and how application of skills on forensic accounting influenced fraud control in County Government in Kenya. Ten counties in Kenya were involved in the study and a total of 415 staff members were the target population. Pilot test was done within two other counties in Kenya not included in the final study. Descriptive research design was used with quantitative and qualitative data applied for analyses. Inferential statistics were obtained from regression analysis which entailed normality test, multicollinearity test, model fitness, model specification and test of hypothesis done at 95% confidence level. These assisted in making the decision on whether to reject or accept null hypotheses. All the study's null hypotheses were rejected. Forensic accounting skills was the resilient variable followed by fraud management tools, forensic accounting policies and the least was the level of awareness on methods of forensic accounting. The conclusions were based on the study findings and recommendations derived. The research established that policies on forensic accounting were not properly enforced by county government employees to fight threat of fraud. County governments requires to be vigilant in reporting cases of fraud as the study concluded that reporting of the cases could be hampered by lack of fraud control plan and inefficient fraud reporting mechanism. Another important conclusion was that county governments should incorporate external fraud experts to deter perpetration of fraud. Likewise, reporting of incidences of fraud has not been very effective in many organizations across the globe; therefore, additional study can be done to establish whether fraud reporting policy can assist in eradication of fraud incidences as the management improve on use of traditional and modern tools to detect and prevent fraud. The study, recommend that accounting experts and consumers needs more information on the importance of forensic accounting and how it can be used to eradicate fraud.

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## **ABBREVIATIONS/ACRONYMS**

<b>ACFE</b>	Association of Certified Fraud Examiners
<b>ANOVA</b>	Analysis of Variance
<b>CAAT</b>	Computer Assisted Auditing Tools
<b>CAQ</b>	Center for Audit Quality
<b>CIPE</b>	Center for International Private Enterprise
<b>COSO</b>	Committee of Sponsoring Organization
<b>EACC</b>	Ethics and Anti-Corruption Commission
<b>FBI</b>	Federal Bureau of Investigation
<b>FCMLTF</b>	Fraud, Corruption, Money Laundering and Terrorism Financing
<b>ICAC</b>	Independent Commission against Corruption
<b>ICS</b>	Internal Control Systems
<b>IFMIS</b>	Integrated Financial Management Information System
<b>IMF</b>	International Monetary Fund
<b>IRS</b>	Internal Reporting Standards
<b>MMR</b>	Mixed Method Research
<b>NACOSTI</b>	National Commission for Science Technology and Innovation
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>SOX</b>	Sarbanes Oxley Act
<b>UNAC</b>	United Nations convention against corruption

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Introduction**

This chapter presents background information on subject of research and covers statement of the problem, research objectives, research hypotheses, scope of the study and significance of the study. The chapter also covers other sections including limitations and delimitations of the study and operational definition of terms. In the background of the study the study reviews the key concepts and how they relate to fraud control.

### **1.1 Background to the Study**

Fraudulent acts have afflicted most aspects of the world economy for which Kenya County Governments are not exceptional (Oguda, Odhiambo & Byaruhanga, 2015). Fraud affects all types of organizations regardless of whether they are developed, under-developed or developing (Association of Certified Fraud Examiners, 2012; Ocansey, Adegbie & Dada, 2015). According to Kumari and Debnath (2017), studies done on the area of fraud control confirmed that there was need to enrich fraud prevention and detection as a response and a close scrutiny to financial and economic crime in private and government agencies globally. However, fraud is difficult to expose because most of the fraud incidences identified may not be reported for fear of bad publicity and loss of political mileage.

In the United Kingdom, the Audit Commission of UK (2012) report indicated that national governments and devolved units' lose huge sum of money annually to fraud and related issues. Numerous fraud incidences have been reported in major world entities such as ENRON, WORLDCOM, HIH insurance (Australia) and Maxwell among others which has put professional accountants in a critical condition (Prabowo, 2012). According to the reports, strong fraud control systems needs to be established

in order to capture the attention of auditors and reduce the risk of fraud. Between the year 2013 and 2015 performing firms in private and public sectors had an increment of 80% in fraudulent cases which led to the loss of confidence in the ability to control fraud and efficiency of traditional methods of fraud control across the globe (ACFE, 2014; Gee & Button, 2015).

In Africa, several accounting scandals have led to partial collapse of public and private organizations. For instance, Reserve Bank of Zimbabwe, Cadbury, Board of Oceanic Bank, Intercontinental and Afribank in Nigeria all collapsed partially due to accounting scandals (IMF report, 2006). In South Africa corruption has been one of the major contributor of losses in government institutions annually in Western Cape Provincial Government (Public Protector Report, 2013). Additionally, fraudulent actions have been experienced in central Africa whereby millions of Ghanian Cedis were lost which led to the loss of revenue as well as loss of confidence in government institutions (Akinyomi, 2012). Thus, weak control system as well as nonstandard financial reporting are key contributors to fraudulent activities in African countries (Okafor, & Okaro, 2013). Certainly, all these situations are horrible and could only be resolved if forensic accountants' are engaged in all sectors in the African countries.

In Kenya, fraud has been one of the major contributors of slow economic growth in public and private sectors. Several management teams of key national corporations have been champions of financial dishonesty which has continually impaired organization's operations. Some practical examples in Kenya includes near downfall of National Bank in Kenya and collapse of Computer Management Corporation (CMC) motors which eventually resulted to it selling to Alfatium (Mwangi, Iraya, & Muchoki, 2015). Recently imperial Banks and Chase Bank had been placed under

receivership. According to Maina and Sakwa (2012) many organizations in Kenya have been implicated with massive fraud which has resulted to the collapse of corporations such as Bulk Medicated Ltd and Nyaga Stock brokers where some of their financial statements implied that they were sound despite their internal weakness. Donors have been reluctant to give aid to Kenyan government due to fraud amidst measures which have been put to combat crime like Ethics and Anti-Corruption Commission (EACC), Integrated Finance Management Information System (IFMIS), Director of Public Prosecution (DPP) and Director of Criminal Investigation (DCI) (UN-REDS program, 2013).

Technological advancement has changed traditional way of doing business in the developing economies. Dynamic fraud monster has sprawled enormously past the new advanced opportunities which have often been watered down by refined, well educated, and competent fraudsters (Price Water House Coopers, 2011). Normally, auditors have been trained to act and behave like investigators, but on the contrary their skills have often been drifted against safeguarding organizations from fraud which has therefore shifted the paradigm to forensic accounting in order to control fraud (Zamzami, Nusa & Timur, 2016).

Regardless of many resolutions and supervision by Central bank of Kenya on prudent guidelines and fraud control mechanisms, the internal fraud typologies and fraud loss has been rising up with less recovery rate (CBK, 2014; BFID Annual Report, 2015). The amount lost to fraud in Kenya is approximately Kenya shillings 3.3 Billion and it is anticipated to continually increase in the near future (BFID Annual Report, 2015).

Fraudulent acts go undetected and even if they are detected there is no enough evidence to bring culprits into books hence demand for forensic accounting. Forensic

Accounting was coined by Peloubet in 1946 and has gained supremacy in the fight against financial and economic crimes (Crumbley, 2001; Okoye & Gbegi, 2013). Practitioners have come into agreement that forensic examination of financial transactions can combat economic crime because fraudsters are getting smarter every day (Carroll, 2015). According to Bierstaker, Brody and Pacini (2006) continuous use of techniques for forensic accounting would be an efficient method to curb fraud and related menace. The report by World Bank (2016) supports that in the 21st century fraud behavior and its related consequences have been a hard nut to crack which has distressed organization managers as long as monetary transactions are involved.

Accounting fraud is therefore a multifaceted and dynamic phenomenon which needs a deep understanding of its underlying behavior when designing fraud prevention and detection mechanism. Essentially, an expert-based approach such as forensic accounting is inevitable because it integrates previously detected fraud cases in order to develop a system for discovering upcoming cases of fraud (Baesens, Van & Verbeke, 2015). Current fraud detection methods involve labor-intensive investigation of suspicious cases that heavily rely on human proficiency which is an extremely expensive assignment in terms of time and manpower.

Studies by Ozkul and Pamukcul (2012); Modudgu and Anyaduba (2013) revealed that the discipline of Forensic Accounting has emerged as a response to high incidence of fraud. Assertions by Noviyanti and Winata (2015) reveals that the discipline of forensic examination is anchored on 85/10/5 tenet, which declares that 85% of employees in any form of organization may act fraudulently irrespective of their status provided an opportunity for fraud prevails itself, 10% of the staff may act professionally and may shun deceitful behavior and 5% of workforce may swindle organization resources irrespective of the internal control systems put in place. Most

studies done on fraud suggested that many organizations have not provided pertinent disclosures on financial and non-financial transactions that would assist in fraud alleviation (Bhasin, 2011; Islam, Rahman & Hassan, 2011).

### **1.1.1 Overview of Forensic Accounting in Developing Economies**

An establishment by Enofe, Okpako and Atube (2013) indicated that the discipline of forensic accounting has been faced with many bottlenecks that have threatened forensic accounting applicability in the third world countries. These bottlenecks include: Producing acceptable evidence for prosecution; information tolerability in regard to the laws of the land and globalization of the economy which has eased relocation of fraudsters to other countries resulting to inter- jurisdiction problem when the proceeds of fraud is held in offshore accounts.

Akelola (2012) asserts that forensic examination of book of accounts to control fraud has often been embraced as a responsive tactic at the end of the auditing process when fraud has already occurred particularly in the third world countries. Top management of public entities consider it to be too expensive to employ a full-time forensic accountant. Instead, organizations decide on strengthening organizational structures of control to evade contracting services of forensic accountants and fraud examiners. Nevertheless, this does not cure the malignant loss of public coffers because in absence of investigative skills fraud control would remain to be a dream and a vocabulary in the public domain.

Huber (2012) resolved that the discipline of forensic accounting has narrowly been associated with societal demand. Thus, expansion and revolution of economy would act as a fundamental force to the development of forensic accounting in the growing nations. Forensic accountant therefore needs to undertake their functions with extreme care in order to understand fraud patterns, ascertain and establish various fraud

models and institute communiqué link amongst diverse fraud themes in the third world countries. In addition, Huber (2012) suggested that forensic accounting ought to be cast-off as proactive measure and not as a reactive method in fraud control and if possible, it needs to be incorporated as a standard for internal audit system in private and public sector in developing countries.

Chep'chieng (2014) underscored that the discipline of forensic accounting needs full appreciation as a result of increased organization failure. Auditing and investigative arm of most government institutions in developing countries are commonly handled by incompetent and inexperienced technocrats in relation to fraud control. Most professional accountants lack forensic accounting proficiency and when called upon to take investigative assignments they are unable to produce supportive evidence for fraud examination. Most accountants believe that once they have finished certified public accounts final exams and practice in an audit firm for three years, they automatically acquire membership certificate which can guarantee them to investigate fraud or swindling of public resources in developing countries (Zhang & Zhang, 2010).

Oguda, Odhiambo and Byaruhanga (2015) found out that a comprehensive fraud investigation mechanism builds an insight for deceptive behavior and further assists in developing an effective fraud control method. The study recommended that organizations need to rework on fraud control approaches by developing sophisticated techniques to curb fraud menace.

Kenyan Government currently relies on Engineering, Procurement, Construction and Finance (EPCF) model which allows successful bidders to mobilize resources through loan, provide engineering designs services, procure materials and later serve as



general contractor which has been the game changer on fraud control since organizations have lost ownership of processes. According to Gill (2009), perpetrators of fraud in developing countries are getting smarter day by day as their prowess in information technology advance past the skills of employees in many organizations and therefore exposure methods needs to continually advance. Kenya has been rated to be the leader in occupation fraud at 66% which is perceived to be twice the global mean which stands at 34% in government organizations (Mahinda, 2012). Many organizations have been forced to cover fraudulent acts for fear of damaging their reputation which has made it difficult to investigate, detect and prevent occurrence of fraud (Omondi, 2013).

There are a number of Kenyan local studies carried out by scholars on fraud in the banking sector. Wabera (2012) cited in Kimani and Ondigo (2017) carried out a study that established the challenges of fraud faced by the banks in Kenya. Akelola (2012) conducted a study on characteristics of fraud and fraud management in Kenyan banking sector. Kabue (2012) made a study on internal control systems as a measure of fraud in commercial banks. The study established that strong internal control systems were fundamental in bank management as they contributed to healthy operations within the bank. In addition, the study found out that internal control systems enable banks to achieve the set objectives, comply with laws and regulations as well as facilitate in reliable financial reporting. The study concluded that with increasing cases of fraud in the banking sector there was need to ensure that a strong ICS exist to assist in detection and prevention of fraud. The findings were supported by Nyakiarimi and Karwirwa (2015); Oguda, Odhiambo and Byrahanga, (2015) who found out that fraudulent activities' in the banks could be reduced by instituting strong ICS. Wanaemba (2010) made a study on the challenges of fraud in the

commercial banks in Kenya while Waigumo (2012) found out that fraud risk posed a significant threat to the banking sector in Kenya (Kimani & Ondigo, 2017). All these past studies provided adequate knowledge to scholars and practitioners on the area of fraud. Little evidence is known on forensic accounting and fraud control among government institution and specifically the county governments.

### **1.1.2 An Overview of Fraud Control in County Government in Kenya**

Fraud control in County Governments in Kenya has been of great concern to many institutions national and internationally. Ethics and Anti-Corruption Commission in Kenya is the main government agency charged with responsibility by the Kenyan government to carry investigations on cases of fraud and bring numerous reforms useful in fraud control across the county. In this era of devolution, Ethics and Anti-Corruption commission has conducted Corruption Risk Assessments (CRAs) for the executives as well as County Assemblies of various County Governments with an aim of laying strategies which can identify and profile risk of fraud in the counties.

The EACC Annual Reports, (2015/2016; 2016/2017), indicated that among the strategies used by EACC to control fraud in the counties are; analysis of threat of fraud carried in thirteen County Executives as well as County Assemblies in the financial year 2015/2016 and evaluation of fraud risk in seven County Executives and County Assemblies in the financial year 2016/2017.

County governments have benefited from training and workshops which could impact skills on fraud control. For instance, many county governments have come up with a number of fraud control awareness methods such as: implementing school based programmes on fraud alleviation, formation of Community Based Anti-Corruption Monitors, sensitization on leadership and integrity, conducting county anti-corruption weeks and outreach clinics and establishing capacity building programmes for staff in

the County Government. County Public Service Boards (CPSB) and County Assembly Service Boards (CASB) have also devolved public service commission by ensuring that there is effective Declaration of Income, Assets and Liabilities in the County Governments in Kenya. In addition, organization's tasked with fraud control at the national level have provided technical support through induction workshops for the newly elected Governors and Deputy Governors as well as equipping County Executive Committees with requisite skills and knowledge to implement chapter six of the Kenyan constitution (EACC report, 2017/2018).

According to EACC Annual report (2016/2017), County Governments in Kenya are members of Kenya Leadership Integrity Forum (KLIF) which is an inter-sector platform that brings all stakeholders in Kenya with an aim of developing strategies that can fight fraud and corruption and promote ethics in the organization. For example, KLIF developed Kenya Integrity Plan (KIP) for the period 2015-2019 that takes into account: Kenya's Vision 2030, The Kenyan Constitution and other legal frameworks as well as policy instruments useful in fraud control. Likewise, KLIF supports UN General Assembly Resolution 58/4 of 2003 that raise awareness on how corruption undermines democracy and the rule of law by commemorating the International Anti-Corruption Day (IACD). On the other hand, County Governments have eased the burden of fraud control by collaborating with Multi-Agency Team (MAT) to enhance investigation and prosecution of corruption and economic crimes which a cost-effective system that cooperates, collaborate and coordinates with other law enforcement agencies (EACC report, 2017/2018).

Amidst these efforts, the level of fraud has been on the rise in the county governments in Kenya due to non-adherence to Specific Leadership and Integrity Codes. Some of the challenges on fraud control in County Governments in Kenya includes: inadequate

legal and regulatory framework for enforcing Chapter Six of the Constitution; inadequate use of Declarations of Income, Assets and Liabilities (DIALs) report to control fraud and lack of Integrity during vetting by the County Assemblies. Other drawbacks on fraud control in counties includes: inability to support integrity and anti- corruption agenda, tolerance of fraud and corruption by the society, sluggish judicial process and antagonistic court decisions, Deep-rooted fraud and corruption and immoral character in the County Governments and politicization of leadership and integrity. Particularly, in the year 2016, proportion of people who sought for kickbacks while seeking services from public offices were 63.6% compared to the year 2017 which was 63.5% hence there was no significant change (EACC Annual Reports, 2017/2018). Equally, the perceived level of fraud and corruption index reduced marginally in the year 2017 where it dropped from 79.4 % in 2016 to 70.4 % in the year 2017 (EACC report, 2017/2018).

The study took cognizance of the Corruption Risk Assessments conducted in the year 2016 by Ethics and Anti-Corruption Commission of which majority of the counties found were within mount Kenya region (EACC Annual report, 2016/2017). This explains the basis of selecting Mount Kenya region has an area of interest and study.

## **1.2 Statement of the Problem**

There has been a growing demand for forensic accounting by many private and public companies as well as government institutions globally. It has been realized that effects and causes of fraud and technical errors are made by human. In Kenyan, County Governments play a major role in economic growth and development through provision of services to Kenyan citizens. Devolved units were targeted to decentralize resources by bringing them closer to the people. While many county Government are working hard to achieve this mandate, fraud has been the major

drawback since it has been rationalized in several county governments in Kenya. The EACC Annual Report 2015/2016, revealed that complaints and allegations under investigation were found to be 24% on embezzlement of public funds, 10% on public procurement irregularities and 6% on fraudulent acquisition and disposal of public property. The EACC Annual Report 2015/2016 indicated that 34 out of 78 cases involved Executive and County Assemblies. In a general manner out of 101 cases, 48% involved county governments in Kenya. Both financial and non-financial fraud cases are alarming and uncontrollable within counties in Kenya. Theoretically, amalgamation of forensic investigation to fraud control would reduce fraud related issues but this has not been the case within counties in Kenya which were implicated in the EACC Annual Report 2015/2016. Amidst government efforts to equip accountants with the necessary skills on forensic accounting, many county governments are not taking steps to seal loopholes on revenue pilferage (EACC Annual Report, 2017/2018). Therefore, this study sought to investigate the influence of forensic accounting on fraud control in county governments in Kenya. Specifically, the study sought to establish whether policies in forensic accounting, fraud management tools and level of awareness on methods of forensic accounting among employees influenced fraud control in county governments. The study finally sought to find out whether application of skills on forensic accounting in county governments in Kenya would assist in control of fraud. .

### **1.3 Purpose of the study**

The purpose of the study was to conduct an investigation within the counties in Kenya to proffer a more comprehensive conclusions and recommendations regarding contribution of forensic accounting on fraud prevention and exposure in the county governments.

## **1.4 General Objectives**

The general objective of the study was to investigate the contribution of forensic accounting on fraud control in county governments in Kenya

### **1.4.1 Specific Objectives**

The specific objectives of the study were to:

- i. Establish the extent to which implementation of forensic accounting policies influenced fraud control in county governments in Kenya.
- ii. Determine the extent to which fraud management tools influenced fraud control in county governments in Kenya.
- iii. Establish the extent to which the level of awareness on methods of forensic accounting influenced fraud control in county governments in Kenya.
- iv. Examine the extent to which application of forensic accounting skills influenced fraud control in county governments in Kenya.

## **1.5 Research Hypotheses**

In the study the following null hypotheses were tested;

**Ho1:** Implementation of forensic accounting policies have no statistical significance influence on fraud control in county governments in Kenya.

**Ho2:** Fraud management tools have no statistical significance influence on fraud control in county governments in Kenya.

**Ho3:** Level of awareness on methods of forensic accounting have no statistical significance influence on fraud control in county governments in Kenya.

**Ho4:** Application of forensic accounting skills have no statistical significance influence on fraud control in county governments in Kenya.

### **1.6 Justification of the Study**

The objective of national government is to reduce fraud and corruption in all government institutions, county government included and equip county management teams with adequate skills to control fraud. National governments implement this goal by ensuring that county governments have proper policies, they have engaged skilled human capital and they have put necessary measures to control fraud. Lastly, they ensure that all individuals implicated in any fraud are brought to book. However, this has not been achieved in County Governments in Kenya because cases of fraud and financial scandals have been surfacing day by day. Kenya National government treasury has been on the forefront in instituting internal controls which would deter fraud but ironically they have continually been circumvented by county government management teams.

### **1.7 Assumptions of the Study**

Assumptions are facts assumed to be true and useful for developing opinions, generating evidence, and drawing conclusions in a research study. They also provide the basis for selecting theories relevant to the study as well as guiding on the choice of research methodology. The study was based on the following assumptions. First, the study assumed that it was possible for county governments to detect and prevent fraud in all the departments. Equally, the study assumed that the model used was viable and moderately appropriate for making decisions and drawing valid conclusions for the study.

### **1.8 Limitation of the Study**

The study considered; forensic accounting policies, fraud management tools, level of awareness on methods of forensic accounting and application of forensic accounting skills as predictors of fraud control in the County Governments in Kenya this limited the study as other predictors not included could be directly influence fraud control.

### **1.9 Scope of the Study**

The study sought to determine the contribution of forensic accounting on fraud control among county governments in Mount Kenya region. The study specifically established how forensic accounting would curb fraud by either detecting or exposing fraudulent acts within government by ensuring that county governments don't lose revenue or assets to individuals with personal interest. During formation of county governments, they were required to implement policies in line with regulations by the national government. However, amidst these requirements, they have also emulated bad behaviors' which have led to fraudulent acts. Proper implementation of these policies would lead to reduction of fraudulent acts within county government entities. In an effort to ensure that prevention of fraud is achieved in the county governments, fraud management tools needs to be put in place. Fraud management tools range from conventional to modern fraud management tools. Employee's awareness on appropriate methods was another issue of concern. County governments need to enlighten its employees on dangers of fraud, causes of fraud, consequences of getting involved in fraud, how to avoid perpetration of fraud and importance of curbing fraud. County staff need to be well skilled on forensic accounting, thus the study sought to determine the influence of forensic accounting skills and its contribution towards curbing fraud in the county governments in Kenya.

### **1.10 Significance of the study**

The study findings are likely to impact positively on the following areas; the national government as the regulator will understand the discipline of forensic accounting and its applicability in the arraignment of suspected culprits in the court of law. This is because cases are dragged in court, taking years before anybody is made responsible for the fraudulent act. Investors will invest in counties incase fraud is curbed and



controllable. This is because transactions would be done in a transparent and accountable manner. The study will provide and contribute to the already existing body of knowledge by assisting scholars to understand forensic accounting and its role in fraud control. The study may help the County government management to understand and identify areas that are most vulnerable to fraud so that they could seal loopholes for fraud. Scholars interested with forensic accountings as a career can benefit as they can understand the key skills required before they can qualify for the job. The findings from the study may enlighten stakeholders, community, employees and administrators in the county government on the status of fraud and fraud control in the county government in Kenya. Finally, citizens from various counties would benefit from the study findings because it would enhance their skills on how to carry effective public participation which has been hindered by massive fraud and lack of value for money due to increased fraud incidences.

### **1.11 Operational definition of terms**

**Forensic accounting:** Branch of investigative accounting which supports litigation by producing an analysis of account that is suitable for court process and ultimately assist in dispute resolution.

**Fraud:** This refers to use of tricks and dishonest means to take away organization resources based on the position held in the organization for selfish gain.

**Fraud control:** This refers to use of techniques that can prevent occurrence of fraud in the organization, use of other mechanisms that can deter fraud and engaging qualified personnel to expose fraud.

**Forensic Accounting policies:** This is the application of procedures, methods and techniques for investigative accounting to establish whether organizational policies are operating efficiently to deter perpetration of fraud.

**Fraud management tools:** This refers to the use of tools that can forensically examine organization's transactions in order to prevent and detect fraudulent activities.

**Awareness on methods of forensic accounting:** This involves analysis of methods used in the organization to establish whether they are effective for preventing occurrence of fraud.

**Forensic accounting skills:** This is the application of skills in forensic accounting to enable users and preparers of financial statement prevent occurrence of fraud in the organization.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The chapter presents a review of related studies that focused on forensic accounting and fraud control in the past. The chapter covers theoretical review, empirical literature review, conceptual framework and summary of the literature review.

#### **2.1 Theoretical Review**

This discusses theories that underpins the study in respect to study variables. The theories and models discussed include: Routine Activities Theory, Deterrence Theory, General strain theory, Anomie Theory, Mindset and Problem Representation Theory, Theory of Resolved Action, Fraud Diamond Model and Fraud Savvy Model.

##### **2.1.1 Routine Activities Theory**

The key proponent of Routine Activities Theory were Lawrence Cohen and Marcus Felson in the year 1979. Routine Activities Theory was used to explain attributes of antisocial behavior between 1947 and 1974 in the United State of America with an aim to expose trends of crime (Cohen & Felson, 1979). The theory was progressive in nature and was used to examine changes in crime rate after World War II (Kennedy & Forde, 1990). Routine Activities Theory has been used to enhance a deeper insight of deceitful behavior. Additionally, Routine Activities Theory has assisted people to understand various attributes of a fraudster which are valuable in the fight against fraud (Hartel, Junger & Wieringa, 2010).

Routine Activities Theory is an important concept of fraud theory which refers occurrence of fraud as a relationship of people and place. Thus, Routine Activities Theory presents a straightforward explanation of why crimes such as fraud occur. Explicitly, the theory explains why fraud takes place under some particular situations

instead of understanding actions of fraudster as time-based occurrence (Felson & Clarke, 1998).

In the beginning, Routine Activities Theory was used to contact people who were involved in property crimes but nowadays it has heavily been applied to many other kinds of deviant behavior such as fraud. The diversity of activities done in organizations has often enabled fraudsters to get into contact with employees which has made fraud control a difficult task. The theory has therefore played a crucial role in fraud elimination because routine activities performed by employees would act as an initial stage for fraud control in the organization. Routine activities theory affirms that fraud would certainly occur in case employees are left unsupervised and fraud deterrence mechanisms are weak in absence of solid barriers (McQuade, 2006).

According to Miller (2013), fraud occurs when suitable objects and motivated offender meet in absence of capable guardians. Routine Activities Theory assists management to identify ways in which fraud can occur by helping them to understand challenges which can be experienced in fraud control. Tilley (2009) argued that Routine Activities Theory analyses attributes of a fraudster by understanding practices that make fraud to occur in order to develop strategies to eradicate it. Therefore, routine activities theory argues that incidences of fraud can reduce in the organizations in case management decrease probability for dishonest activities (Williams, 2016).

Bradford (2013) demonstrates effectiveness of Routine Activities Theory in forensic accounting by explaining various attributes which surrounds fraudulent behavior. For instance, from the social standpoint, Routine Activities Theory argues that diverse roles performed in the organization could create opportunities for fraud. Besides, from

individual viewpoint, employee's positions or routine activities done can either increase or reduce opportunities for fraud in the organization (Fisher, Daigle & Cullen 2010).

In reference to fraud in County government, Routine Activities Theory is an illustration of environmental theory, where people's relationships align with place and time for fraud to occur (Williams, 2016). Therefore, fraud could occur if there is nothing which could block it from being perpetrated in presence of capable fraud perpetrators (Marcum, Higgins & Ricketts, 2010). Certainly, lack of elements which can deter fraud could increase fraudulent acts.

Routine activity includes diverse fraud environments such as online transactions. Online transactions might be difficult to control in many organizations if there are no proper controls put in place. Some routine activities connected to online transactions includes: purchasing, banking, selling, use of email and social networking. This may involve use of computers in public offices and therefore could increase virus infection (Wilcox, Madensen & Tillyer, 2007). Therefore, if online transaction is not guarded closely, it can influence electronic fraudsters to create loopholes for fraud.

The first element in routine activity theory is lack of a proficient guard; that is, a person or an object that can deter occurrence of fraud (Cohen & Felson, 1979). Inclusion of a proficient and capable guard can prevent occurrence of fraud while lack of a capable guard could create room for fraud to occur. A talented guard includes any person in the society or in any form of environment who can act as a gate keeper of an estate or a guard of any property inform of police officers or security guards (Felson & Rachel, 2010). However, in routine activity theory, guardianship can also be described as a figurative thing which refers to physical

objects or a group of people who can prevent incidences of fraud in the organization (Hollis-Peel, et al., 2011). For instance, Hollis-Peel et al. (2011) argued that a physical guard could be a closed-circuit television (CCTV) that could monitor routine activities because it may not be seen physically.

According to Felson (2008), the second element in Routine Activities Theory is motivated offender. The purpose of a motivated offender is not to underestimate the ability of fraudster, but to identify various attributes which may be inherent in a fraud incidence when fraud targets exists. A motivated offender might decide to perpetrate fraud by considering available opportunities so that they can be successful. In addition, the fraudster might be aware of the benefit or the danger he/she may get into when caught. Thus, a motivated offender may be persuaded to commit fraud irrespective of the laws of the land and could be predisposed by environmental conditions or other external factors.

Inconsistencies in organization's routine activities could occur as a result of incompetence and greediness of guardians as well as availability of fraud target. This may strengthen the probability of fraud occurrence incase elements in routine activities create opportunities for fraud. Moreover, another significant attribute of Routine Activity Theory is that occurrence of fraud might not be a societal problem (Tillyer & Eck, 2009). It is probable there could be a number of fraud targets that fraudsters could find suitable and go undetected. Therefore, fraud control may not involve everyone in the society which leaves institutions affected with the role to alleviate it.

The third element in routine activity theory is fraud target. A fraud target may be human being or an object which could be used to perpetrate fraud. Felson (2008)

maintained that probability of fraud occurrence is an attribute of twelve factors which can be named from the perspective of a fraudster represented by the acronym ‘VIVA’ which refers to the degree of threat and danger and ‘CRAVED’ which refers to the degree of fraud perpetration. The abbreviation “CRAVED” represents Concealable, Removable, Available, Valuable, Enjoyable and Disposable while, “VIVA” represents Value, Inertia, Visibility and Accessibility (Sutton, 2009). The components in VIVA represents attributes that make organizations as well as individuals to pay attention to fraud, while CRAVED focuses on essential aspects that entice people to fraud (Anderson, 2006). The current study attempts to investigate essential attributes that make fraud desirable as well as important attributes that make fraud attractive; hence it embraces the two components; CRAVED and VIVA.

The initial letter for acronym VIVA is “Value” which supports that fraudsters might targets departments or ministries which have huge budget lines (Harrell & Lynn, 2013). Therefore, fraud is more prevalent in organizations where substantial amount of budget is controlled by some selected employees as part of routine activity. Yar (2005) defines the term “Inertia” which is the second initial in “VIVA” as the total mass and size of an item, technical requirement, transferability and ease of access to the risky areas. Therefore, areas where fraud can be perpetrated easily without much attention are more susceptible such as procurement department.

The third element in VIVA is “Visibility”. Fraud occurs in areas which are more conspicuous such as procurement departments that can be accessed by every user department making them prone to manipulation. Holtfreter and Reisig (2010) agree that activities such as procurement and electronic fund transfer are more visible to fraudsters in public and private organization. Finally, Felson (1979) defines

accessibility which is the fourth element in VIVA as the capacity and ability of the fraudster to spot a fraud target and take away organizations resources without getting noticed. Therefore, for fraud to occur a fraudster should be in close proximity to the organization's resources.

The term CRAVED focuses on things that draw people's attention to fraud and therefore borrows some aspects in VIVA. Thus, routine activity theory supports essential elements in forensic accounting and therefore employees in county government are more likely to become victims of fraud. Karmen (2015) agreed that employees may be involved in lawful transaction and legitimate office activities but may be dragged to fraud by selfish colleagues. Employees who work with people with a high-fraud motive may be duped into signing unsustainable contracts which would lead to fraud. This could commonly occur in the departments that involve payment or procurement process.

When fraud occurs, guardians may not be far away as Routine Activities Theory assumes; it is likely that the guardians may be aware, but could be unaware of the organizational trends. Carelessness of the guardians may originate from satisfaction that security systems are functioning well and the general believe that nothing could go wrong (Willison & Backhouse, 2006). Therefore, due to work-related pressure, organizations may overlook existing controls which might give in to fraud (Kroll, 2013)

In an effort to get answers to Routine Activities Theory, (Yar, 2005) established that even if organizations could computerize the system in their entirety, the theory still does not explain how application of sophisticated tools could disappoint fraudsters. The study pointed out that organizations need to employ capable people who



understand fraud typology in order to deter perpetration of fraud. Equally, the study emphasized that organization's needs to develop adequate Information center's which supports whistle blowers in order to nab fraudsters. Punishing perpetrators of fraud may lower incidences of fraud because employees might understand repercussions for engaging in fraud (D'Arcy & Herath, 2011).

Notwithstanding its contribution to fraud control, Routine Activities Theory may not single-handedly curtail fraud in totality because fraud thrives like a cancerous cell which spreads in many unconceivable ways till it reaches an incurable stage (Kroll, 2013). Although it is rational to believe that offenders in organizations might be motivated the same, it may not replicate in all the organizations because opportunities for fraud might vary in absence or presence of guardians. Opportunities for fraud may come from methodological aspects, routine functions or non-routine functions of the organization. Methodological opportunities normally originate from barriers in computer information system which may be underutilized in the government's institutions or might arise from multiple approaches which may be used to counter fraud (Samonas & Angell, 2010; Samonas, 2010). On the other hand, routine functions could occur as a result of day to day activities performed in the organization. Equally, non-routine functions could occur as a result of emergency. For instance, procurement of protective equipment for fighting against covid-19 was a non-routine function because it was not anticipated in Kenya.

This researcher has used Routine Activity Theory to explain fraudster's characters in county governments in Kenya. In public sector, "suitable fraud Targets" could be the county treasury, procurement department or technical department where contracts may be awarded. "Motivated Offender" may be an employee or an outsider who might collude with others to perpetrate fraud. "Absenteeism of Capable Guardian"

may be intensified by lack of proper methods to control fraud such as application of forensic accounting. Therefore, fraud occurs at the point where the three elements of Routine Activity Theory; lack of proficient guard, motivated offender and suitable target crisscross each other.

Routine Activities Theory was useful in the current study because organization attitude towards control of fraud appear to be merely simplified and vindicated. Therefore, there is likelihood that fraud might increase if organizational managers do not take drastic measures to ensure there are adequate controls of routine-based activities. Employees in County Government are exposed to fraud due to proximity to motivated offenders such as rogue contractors and the conformist norm of fraud in government entities while physical guardianship such as installation of fraud management tools may not have been fully achieved in Kenya. Likewise, the discipline of forensic accounting has not been the focal point for County Government in Kenya and therefore Routine Activities Theory would act as a bench mark on which forensic accounting policies and fraud management tools would be incorporated so that fraud could be eliminated.

### **2.1.2 Deterrence Theory**

Deterrence theory was a hobbyhorse for two great philosophers (Jeremy Bentham, 1948) and (Beccaria Cesare, 1963) in 18th century. They pointed out that human beings were selfish and thought reasonably in pursuit of stress-free life (Paternoster, 2010; Tombs & Whyte, 2013). The theory was originally developed from criminology where it was used to control criminal behavior (Higgins, Wilson & Fell, 2005). However, as time went by fraud was incorporated as part of criminal behavior. According to this theory, individual fear of punishment could send a signal to the

fraudster that his/her actions are being monitored and the consequences might be dreadful (Nagin & Pogarsky, 2001).

Studies by Nagin and Pogarsky (2001) cited by D'Arcy and Herath (2011) supports that deterrence theory could be used to develop fraud management policy. The studies argued that fraud management policy could be used to counter employee's fraudulent actions in order to understand possible risks that might be experienced. However, Siponen and Vance (2010) pointed out that monitoring employees' actions could be an expensive and complicated assignment hence it is difficult to establish whether fraud deterrence methods have been beneficial on fraud control.

Punishing fraudsters can reduce the number of fraudulent acts because employees might understand consequences of their actions (D'Arcy & Herath, 2011). D'Arcy and Herath (2011) pointed out that Deterrence method could predict employee behavior at different circumstances because behavior can either support or hinder fraud control. In most organizations fraud can occur as a result of failure to adhere to financial control policies (Herath & Rao, 2009). Therefore, organizations need to upgrade policies in fraud control in order to alleviate fraud (Siponen & Vance, 2010; D'Arcy & Herath 2011).

According to Deterrence theory, if the punishment given to employees is stringent, employees can avoid fraudulent behavior which could be a remedy in fraud control (Herath & Rao, 2009). This was supported by D'Arcy, Hovav and Galletta, (2009) who argued that fraud deterrence techniques enable people to evaluate the possibility of getting caught in order to understand underlain consequences before making decisions. However, it is difficult to establish whether fraud deterrence methods are efficient in fraud control because they are difficult to evaluate and monitor (Herath &

Rao 2009). On the other hand, monitoring employees can be very costly and complicated even if forensic accountants are engaged. For instance, continuous check by forensic accountants might demoralize employees if they realize that their actions are being surveilled (D'Arcy et al. 2009). However, despite of the problems experienced in monitoring employee behavior, deterrence theory has widely been used to prevent and detect fraud in many organizations (Herath & Rao, 2009). This is mainly due to complexity and profound differences in methods of fraud control used in many organizations. Thus, deterrence theory is still considered to be the most suitable theory applicable in fraud control.

Fraud deterrence theory was useful in the present study because fraud cannot occur spontaneously; it must have been mastermind by internal staff who might collude with selfish employees or other outside parties in the organization. Deterrence Theory was used to establish potential fraud opportunities so that proper mechanisms can be developed to eradicate various camouflaging patterns which could make fraud to thrive in the organizations. Fraud deterrence might be a short-lived remedy, but incorporating fraud deterrent mechanisms could counter any future incidences of fraud. One of the confusing point in fraud control is the distinction between fraud detection and fraud deterrence. The prima facie difference is that fraud detection entails review of old transactions to establish whether fraud had occurred. On the other hand, fraud deterrence involves a complete examination of present controls in order to establish whether fraud can occur in future which can be the basis for deterrence theory.

Deterrence theory is therefore influential in fraud control and will remain an outstanding pillar in control of antisocial behavior. The theory was suitable for this

study as it was evident that proper use of fraud management tools could alleviate fraud. Equally, forensic accounting has not gained prominence on fraud control in the County Government in Kenya and therefore Deterrence Theory would act as a base on which fraud management tools would be incorporated to enhance awareness of methods on forensic accounting.

### **2.1.3 General Strain Theory**

General strain theory can be traced from Strain theory which was widely discussed and used in the beginning of 20th century. The theory was championed by Edwin Sutherland and Robert Merton who were prominent scholars in the early years (Merton, 1938; Sutherland, 1939). Precisely, the complete idea of the principle strain theory was triggered by Merton in 1938. Merton (1938) was an exceptional intellectual who applied strain theory and related it to anomie theory which was pioneered by Durkheim's in the year 1987 in the course of industrial growth.

Previous versions of strain viewed it as a product of inability to achieve financial success but the current view of strain as moved from its earlier description to dishonest behavior such as acquisition of resources fraudulently (Agnew's, 2012). Durkheim (1951) pointed out that as a result of growth in industries, social class emerged over time and obstacles that earlier prohibited antisocial deeds became less robust leading to fraud. Due to emergence of varied social classes, General Strain Theory was restructured and modified over time to align with structure theories of fraud. Therefore, General Strain Theory is among the key precept of deceitful behavior that attaches strain to immoral, divergent, and antisocial behavior (Agnew, 1992).

According to McShane (2014), the typology of original strain theory has been narrowed further and considered pursuit of monetary success to be a key driver to

strain and fraudulent behavior. These assertions were supported by Brown, Esbensen and Geis (2013) who related General Strain Theory to social structure theories. Social structure theories argue that for a fraud to occur, some degree of strain might influence people's decision. General Strain Theory is closely related to fraud control because lack of societal values could give birth to greed in an effort to alleviate the strain. As a result of greediness, most employees may seek to satisfy personal appetite through deceitful ways to minimize the strain which could affect fraud control (Sofianti, Ludigdo and Irianto, 2014).

The level of strain could be influenced by personal status and the degree of immunity from prosecution in case someone is caught in a fraudulent act (Sutherland, 1939). Brown et., al., (2013) argued that deceitful habits may be prevalent in government institutions but this could depend on economic and social growth of a country. In addition, the ability of a country to respect institutions put in place can also assist in fraud control. For instance, society may place government employees in a high social class irrespective of positions held which might lead to deceptive ambitions, unreasonable desire and greed (Brown et al., 2013). As a result of strain, employees could develop deceptive behavior as a solace for 'crave for wealth' because the income earned is disproportionate to social expectations.

Conventional concepts of strain theory argue that poorer people may be denied genuine opportunities for financial success by rich persons which might result to middle-class status. Ever since the time of memorial, people from lower social classes have been blocked from genuine opportunities such as promotions due to politics. This has therefore widened the gap between the rich and the poor giving in to strain which has become an impediment in fraud control. Most government employees get stuck on one job group for many years which might hinder their career progression.

Once employees stagnate in a job group for a long period, they may result to dishonest behavior such as fraud to alleviate the strain.

Agnew (2015) relates general strain theory to the element of pressure explained in diamond fraud model which supports that people may participate in fraudulent acts because there could be objects that might be driving them towards the desire. The study noted that these objects could be failure to accomplish certain objectives due to inadequacy of financial resources which could give in to rage and frustration (Agnew, 2015). Subsequently, accumulation of negative sentiments may result to unnecessary pressure which could be directed to correct the anomaly that might push some people to fraud.

General Strain Theory was useful in the study because top management may ignore various strains which might lead to deviant behavior. Most incidences of fraud in government institutions are occupational in nature and therefore employees could use positions held to enrich themselves. Consequently, it is probable that senior management may not take drastic measures to alleviate these strains which might result to fraud. Likewise, the discipline of forensic accounting has not been the focal point for County Government in Kenya and therefore general strain theory would be useful for enhancing awareness on methods of forensic accounting to mitigate the strain.

#### **2.1.4 Anomie Theory**

The theory was proposed by Durkheim Emile in the year 1897. Durkheim Emile had a passion for self-governed society which pushed him to come up with various ways to curb deviant behavior (Kozlova, 2015). Emile's theory of Anomie recognized that fraud occurred as result of scarce resources which could not satisfy everyone's needs. According to Farley and Flota (2012), scarcity of resources widens the poverty gap

where poor people become poorer and rich people become richer. Within the context of fraud, Durkheim tried to address the issue of people's perceived happiness as the bedrock for fraudulent behavior. He argued that fraud was a product of disparity between individual needs and the means available to fulfill the current desire (Hilbert, 1989)

Robert K. Merton (1938) elaborated the concept of fraud meticulously by pointing out how fraud contributed adversely to societal moral decay. Merton elaborated that anomie is a societal way of dissatisfaction due to lack of equal and universal opportunities which could give birth to greed in an effort to control scarce resources (Farley & Flota, 2012). In situations where societal needs and means to acquire wealth draws apart inequality and anomie set in (Hilbert, 1989). As a result of society's anomic state, the collective responsibility for control of public resources erodes leading to deviant behavior because of greed (Koh, 2010). Definitely, as a result of perverse socio-economic conditions, social equality remains to be a word which cannot be lived to but merely read in the dictionary.

Most employees believe that amassing of wealthy is the bench mark to success regardless of their designations or monthly remuneration (Bernburg, 2019a). The term success has been coined to enjoy a wide range of definitions depending on employee's school of thought. According to Kozlova, (2015), some employees associate success with high salaries, big positions, driving big cars and owning mansions but all does not satisfy the desire to self-fulfillment even if they engage in fraud.

Fraud is ignited by societal inequilibrium where lower social classes face a disproportionate desire to amass wealth in abnormal ways so that they can get richer



(Bernburg, 2019a). Employees respond and adapt to anomic states in four ways which includes: towing to the standards of the fraudsters, crafting new ways to perpetrate fraud, making fraud habitual and going against organization's rules and regulations (Lamnek, 1979). Farley and Flota (2012) argued that adoption of new ways could be disregarding norms acceptable to the society and following the path of corruption and fraud which might erode virtues of stewardship and accountability. Behavioral change and development of peculiar habits is the most common cue for fraudulent habit. Anomic pressure and fraud related offenses results from exaggerated hopes that arise from mismatch between personal desire and naked eye possibilities. Existence of huge financial disadvantages amidst skewed wealth distribution are the key contributors to fraud in the twenty first century (Bernburg, 2019b).

Corruption and fraud can therefore be regarded as a product of discordancy between "crave to richness" and "fulfillment of that dream" (Smith, 2008; Kozlova 2015). The research therefore focused on forensic accounting as a means to deter anomic pressure. Notably, persons with distinguishing careers and experience in the public service have used their experience and knowledge to circumvent rules and procedures by perpetrating fraud without getting noticed (Couttenier, Rohner & Thoenig, 2017). The question which remains unanswered is how County Governments can develop mechanisms that could deter anomic pressure.

The main aim of the concept of anomie was to enable organizations to understand factors which could influence fraud in order to develop structures which can control it (Merton, 1968). The question which lingered in the researcher's mind is how organizations can establish the relationship between anomie as an acceptable value in the society instead of crave to riches which stain the theory of anomie (Shoemaker, 2010). Merton tried to answer this question by looking keenly at various habits which

show up in the organizations as depicted by government employees (Shoemaker, 2010). It is a common that employees might make decision in adherence to job descriptions but this could contradict laws of the land resulting to behavior considered 'okay'. However, organization managers may be living far from the reality because some decisions may increase fraud menace.

Every Government lays down policies which guides on acceptable behavior in central government or devolved government. Nevertheless, as a result of day to day interaction, individuals may embrace the 'perceived values' inherent in the public service which may be contrary to expectation of good governance and engage in fraud. In a society where 'everything appears normal', norms on fraud control may not be appreciated by every person which might result to normlessness or 'anomie'.

Anomie theory was useful in the present study because most county government employees believe that amassing of wealth fraudulent is normal in government institutions. Some employees believe that the salary earned at the end of the month is not sufficient to cater for the needs and therefore may come up with ways to reduce the gap by engaging in fraud as a result of anomie. It is useful to incorporate forensic accounting as a remedy to counter anomie, as alluded by Durkheim because it is the product of failure by Government to manage fraud and glorification of fraud as a culture in the public sector. Application of forensic accounting skills would deter anomic pressure because employee could realize that their actions are being trailed by forensic accountants.

### **2.1.5 Mindset and Problem Representation Theory**

Mindset is an intellectual position which contains exceptional features that assist people to gather information (Hamilton, Vohs, Sellier & Meyvis, 2011). The information gathered is useful for developing reliable inferences. According to

Dweck and Yeager (2019), mindset enable human beings to come up with right meaning to organizational problems and thereby formulate right goals by shaping people's opinions and actions.

Mindset contributes to how people behave, rationalize issues and resolve problems in the organization. Therefore, mindset has an uninterrupted influence on how individuals make decisions. Incorporation of fraud specialist introduces fraud mindsets which can provide some insight on fraud control in the organization (Hogan et., al., 2008). Researchers in psychology argue that people's intellectual ability directs how they approach various tasks including decision making in the place of work which ultimate influences final judgment (Wyer & Xu, 2010).

The study by PCAOB (2010) suggests that grouping people into different mindset could vary the way tasks are performed which can eventually result to diverse performance outcome. Therefore, different people use various approaches to control fraud. For instance, some employees might come up with ways to counter fraud while others might create loops in the internal control system to mastermind fraudulent behavior. Torelli and Kaikati (2009) used two distinct mindsets to train research participant's and established that behavior differ significantly from one person to another. Employee behavior could be a product of environment, knowledge gap and skills acquired.

It is therefore evident that person's outward character could act as a guide on how people perceive and interpret information (Torelli & Kaiketi, 2009). In addition, mindset can assist people to plan their actions which could afterwards influence behavior. According to Gollwitzer (2012), mindset could help individuals to plan tasks in the organization such as filing of documents, segregation of duties and

maintenance of strong ICS to deter fraud. Moreover, fraud mindset can enhance employee commitment by ensuring that employees work with confidence to accomplish various task.

On the other hand, problem representation refers to individual's intellectual position which help them to understand the problem at hand in order to develop strategies to counter it (Bedard, 1993; Christ, 1993). Problem representation has also been defined as psychological intuition which assists people to identify the problem at hand so that they can come up with solutions to resolve it by avoiding mistakes. Mellers, Schwartz and Cooke (1998) argued that solution to a given problem might come as a result of a challenging situation which need to be resolved immediately or within a short time. Employees therefore need to think through the problematic situation so that they can invent ways to solve it. For instance, in case fraud exist, organizations' managers need to gather available information so that they can trace fraudsters for necessary action (Koonce, 1993; Chui, 2010).

According to mindset and problem representation theory, once the problem has been established, through analysis of the problematic situation needs to be done. Analysis of problematic situation enables management to develop a psychological mental picture of the problem by thinking over it in order to find a lasting solution (Pichert & Anderson, 1977). Therefore, forensic accountant needs to establish whether there is risk of fraud so that proper mechanisms can be developed to alleviate it. In addition, management need to train all the staff on the available methods which can be used to control fraud so that they can develop proper mindset to eradicate the menace. Therefore, employee's perception towards fraud enable the management to realize it's a problem to the organization so that it can be controlled. However, in principle, a paradigm shift from traditional accounting to forensic accounting can enhance critical

decision making, skills upgrade and rational thinking which would develop creative approach to fraud related problems.

The theoretical foundation was important for the study because mindset and problem representation has a direct impact on how auditors and forensic accountant's process information in any organization, particularly on fraud control. The view of mindset and problem representation was very significant because fundamental differences exist on how auditors and forensic accountant's resolve fraud related problems (Silverstone & Daria, 2005; Singleton & Singleton, 2010). Mindsets and problem representation theory argues that a person's psychological ability guides and directs on how people perceive a given problem.

The theory was useful in the study because all the four objectives tried to solve problems related to fraud and therefore proper mindsets need to be developed in the county governments to eradicate it. For instance, for county governments to control fraud, they need to develop policies which are based on rational mindsets to avoid justification of fraud. Similarly, top management need to develop mindsets that incorporates fraud management tools instead of portraying fraud as a problem that cannot be resolved. Equally, organizations should enhance fraud awareness by making sure that fraudulent actions are not recognized as acceptable norms as it is in Kenya's private and public sector. Lastly, acquisition of forensic accounting mindset would be the ultimate path to eradicate fraud related problems. Therefore, the theory wanted to examine how county employees could focus on the information that conform to their mindsets in order to eliminate fraud in the society.

#### **2.1.6 The Resolved Action Theory**

Resolved Action Theory relates behavior to expectancy value theories and mainly focus on how society handles various mindsets (Nicholas & Thompse, 1996).

Resolved Action Theory predicts intention to perform certain acts from two predictors. The first predictor is attitude towards behavior which measures extent to which behavior can be evaluated in order to establish whether it is favorable or unfavorable. The second predictor is subject norm which measures the influence of behavior as directed to other people (Ajzen & Fishbein, 1980). The Theory of Resolved Action was grounded on the belief that human being make decisions by relying on readily available information (Ajzen & Fishbein, 1980).

According to Sheppard Hartwick and Warshaw (1988), it is factual to believe that people's subjective attitude towards certain objects could influence employee behavior in the organization. Thereafter, some subjective attitudes could result to deviant behavior such as perpetration of fraud. In reference to resolved action theory, fraud can occur as a result of personal decision to commit it and ability to control it requires decisive step from the senior management. In addition, the decision on fraud control should originate from the top management so that it can be cascaded down to junior staff who can emulate the footsteps.

The study by Nicholas and Thompson (1966) argued that resolved action theory does not take into account actions which are out of people's control. It established that people who perpetrate fraud normally plan irrespective of the positions held in the office. Therefore, fraud does not occur in situations where people might not act freely because they could be hindered by inadequacy of resources or lack of opportunity to get into the habit. Resolved action theory incorporates attributes of the theory of planned behavior which introduces a third predictor, the perceived behavior control. Perceived behavior control tries to address the problem of incomplete volition. Resolved action Theory is therefore based on behavioral control mediated upon

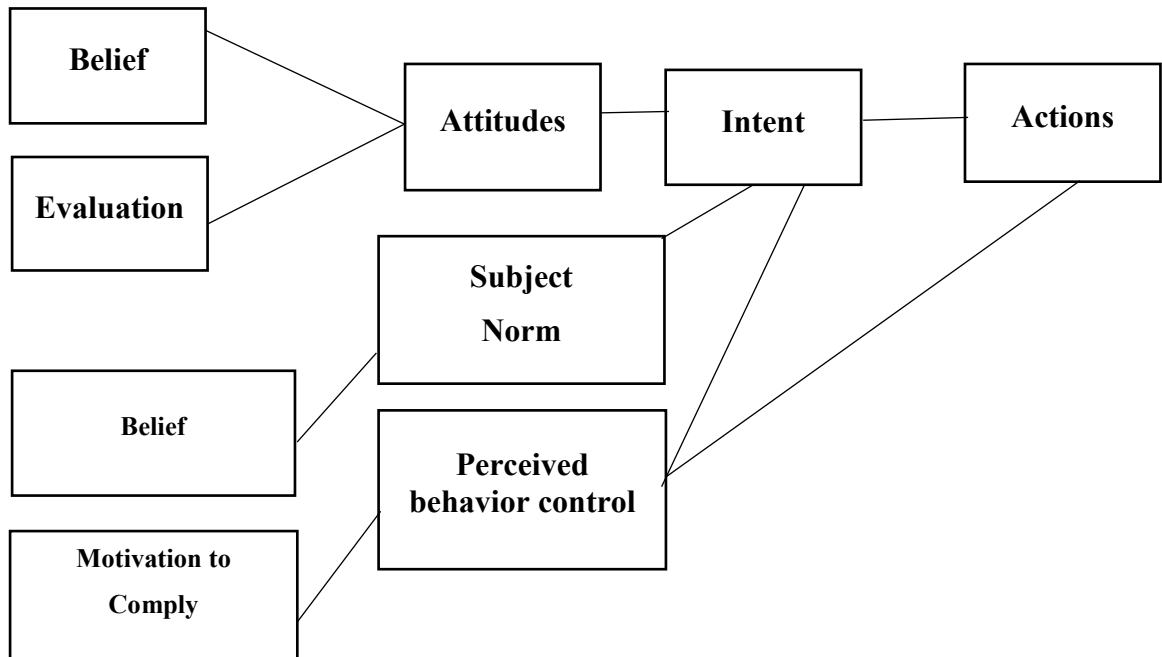
intention (Ajzen, 1980). The theory asserts that people's belief on consequence of a particular behavior might lead to certain outcome.

Resolved action theory contains another element called normative believe. Normative believe tries to explain what other people believe about something in a particular situation. Resolved Action Theory therefore uses normative believe to explain that deviant behavior such as fraud come as a result of a wicked mindset and wrong personal character. For instance, employee's mindsets can be directed towards greed and desire to acquire wealth illegitimately though it may be against acceptable norms in the society (Buffle & Bok, 1996). The original resolved action theory has under gone continuous review and a number of scholars have come up with a number of disparagements which could build its effectiveness in control of fraud.

Resolved Action Theory argued that person's desire to act fraudulently would automatically result to unacceptable behavior such as swindling of public resources. However, this may be untrue because goals can be disrupted by unforeseen circumstance or directed to other objects (Ajzen & Fishbein, 1980). It is evident that some workers may disrespect their supervisors but they may not act fraudulently. In addition, the theory is inappropriate to the study of involuntary behavior because people might not think much about it. The model theory of resolved action is shown in figure 2.1.

**Figure 2.1:** *Model of the Theory of Resolved Action*

*Source: Nicholas and Thompson, (1996).*



Resolved Action Theory was relevant to the current study because it explained how people behave or react towards issues in the organization particularly on fraud control. In addition, the theory could be used as the training ground for indoctrinating acceptable norms and morals in organizations such as county governments. Resolved Action Theory supported the three elements in diamond fraud theory (pressure, opportunities and capabilities) which create loophole for fraud. The focus of the Theory of Resolved Action can be on intention which might be motivated by pressure and opportunities (Mathu, Quaddus & Evans, 2010).

The implication of the Resolved Action Theory was that actions of most fraudsters in the county government may arise from external and internal factors which surround them. Fraud management tools and awareness of methods on forensic accounting were the key objectives supported by Theory of Resolved Action. County government executive team needs to make a resolution on which fraud management tools requires

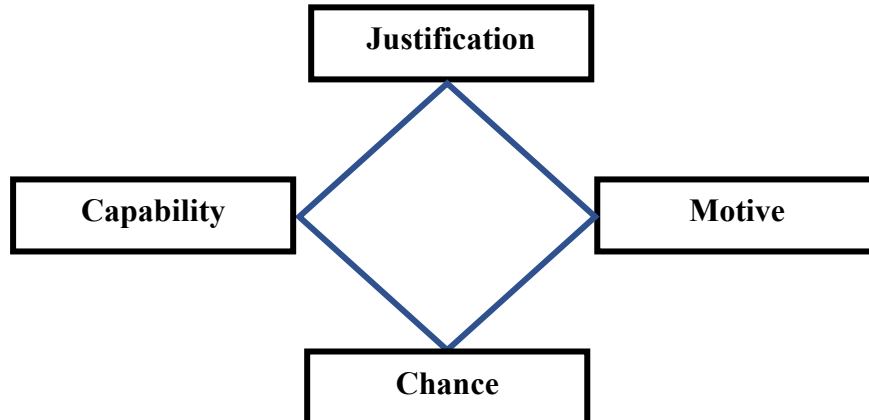


to be used in order to eliminate fraud in the organization. Similarly, in order to enhance fraud awareness organization manager's needs to make decisive step to control fraud as explained in Resolved Action Theory.

### 2.1.7 Fraud Diamond Model

Fraud prevention and detection has led to the development of interdisciplinary approaches to control fraud. These approaches have been used by a number of academicians and professionals to understand the reason why fraud occurs so that it can be eradicated. The most popular model is the fraud triangle developed by (Cressy, 1953) cited by (Ramamoorti, 2008). A better model with four elements was developed by (Gramling and Hermanson, 2009) which had the fourth element called capability attached to the original fraud model.

**Figure 2.2:** *Diamond Four Factor Fraud Model*



Four elements of diamond four factor fraud model are the Perceived Motivation, Assumed chance, Capability to act fraudulently and Justification of why fraud occurs. Perceived motivation relates to elements that result to fraudulent behavior. Anyone who perpetrates fraud may be driven by certain desire to commit deceitful act (Abdullahi, Mansor, 2015). These drives could occur as a result of financial stressors

or non-financial stressors. In case employees believe that the desire to act fraudulently is uncontrollable, this could result to fraud behavior. Certainly, over 95% of fraudulent cases could come up as a result of greed to acquire more than someone's earning (Kiragu et al., 2013). For instance, the study by Vona (2008) highlighted certain reasons that push people to commit fraud which includes: unsustainable expenditures or huge debt, marital and family problems, greediness and living beyond one's means. The study by Chen et al., (2007) documented other causes for fraudulently behavior which include: general irresponsibility, individual problems, crave for positions and employee relationships.

Assumed chance is another element which triggers fraud in the organization. When system of control appears weak, individuals could create an opportunity to commit fraud because they may not be detected (Kelly & Hartley, 2010). A number of factors can create opportunities for fraud and may include contravention of organization policies, lack of fraud management tools and failure to conduct disciplinary action in case employees engage in fraud (Sauser, 2007). The study by Srivastava, Mock and Turner (2005) explained the relationship between desire and perceived chance. They argued that, though the desire to act fraudulently may appear exciting, fraudulent act may not take place unless a chance to perpetrate fraud shows up. Lack of fraud management tools and inadequate internal policies may create opportunities for fraud (Kenyon & Tilton, 2006). Similarly, Lindquist and Singleton (2006) pointed out that incorrect application of fraud management tools may allow employees and the management to exploit organization's system of control to propagate fraud.

Justification is the third element in diamond four fraud model. Justification of fraud means a person could behave in an ethical and acceptable manner but still perpetrate fraud. This is because he/she could rationalize fraudulent behavior by pretending that

fraud is acceptable in the organizations. If a person fails to rationalize fraudulent act, he or she could shun fraudulent behavior. Common examples of justifying fraudulent behavior may be “We are working for the government and the only way to get rich is through taking some money, even if we avoid fraud the big fish will automatically do it”, “I am entitled to take this money to top up my meagre salary.”

Justification of the fraud incidence might not be noticeable because it is difficult to understand how people perceive certain actions. According to Hooper and Pornelli (2010), fraudsters have strange mindsets that enable them to rationalize fraud by assuming that it is a norm in the public sector. Similar assertions were supported by Rae and Subramanian (2008) who pointed out that most employees do not value honest transactions and therefore can do anything to justify fraudulent behavior. Basically, ability to perpetrate fraud depends on individual’s morality as well as personal character (Kenyon & Tilton, 2006). The study by Howe and Malgwi (2006) combined motivation and assumed chance and agreed that the two occur when employees and management attempts to justify fraud instead of castigating it.

According to Cressey (1953), Diamond four factor fraud model is a powerful tool which assists management to understand outstanding attributes which can be used to separate honest workers from fraud perpetrators. Fraudsters often violate the given trust and act fraudulently irrespective of the consequences. This afterwards could bring irreversible damage to the organization because fraudsters often look for opportunity to drain organization resources (Drew & Drew, 2010). As a result of pressure from external and internal forces some employees might rationalize fraud and may consider it to be the norm in government institutions. Justification of reason for committing deceitful act may not be detected easily because fraudsters would often explain in case they are caught in order to exonerate themselves (Dorminey,

Fleming, Kranacher & Riley, 2012). Therefore, every fraudulent might vary in the way it occurs and not all forms of fraud are perpetrated in the same manner.

As much as Ravisankar, Ravi, Raghava and Bose (2011) urged that diamond fraud theory could not be relied fully in eradicating all forms of fraud, it could be used to explain the reason as to why employees in governments' institutions commit fraud. Wolfe and Hermanson (2004) added a fourth element in the original fraud diamond model because pressure, opportunity and fraud justification would not necessarily lead to fraud unless perpetrators had skills and ability to defraud organizations. Mackevicius and Giriunas (2013) argued out that although rationalization, opportunity and perceived motivation would contribute significantly for fraud to occur, capability to cover deceit cannot be ignored. Although a swindler might get a chance to perpetrate fraud, they need to come up with strategies which can be used to commit fraud in order to conceal the evidence. Thus, ability to commit fraud is supported by other factors such as duress, position, intellect, personality, strain and deception (Abdullahi & Mansor, 2015).

The position which an employee holds in the organization may enable him/her to commit fraud and go unnoticed. As pointed out by Wolfe and Hermanson (2004) responsibilities given in form of job description might create room for dishonest workers to contravene organizational policies. The study done by Beasley (1999) indicated that Chief Executive Officers (CEO) were masterminds of fraudulent acts in private and public companies in Kenya represented by about 70% of the respondents. Similarly, Association of Certified Fraud Examiners (2003) indicate that top management or board of directors commit about 46% of the fraudulent acts in many organizations across the globe. The reports indicated that most CEO's and board of

directors ignored the need to establish strong internal control system and therefore thrive under the weakness of ICS to perpetuate fraud.

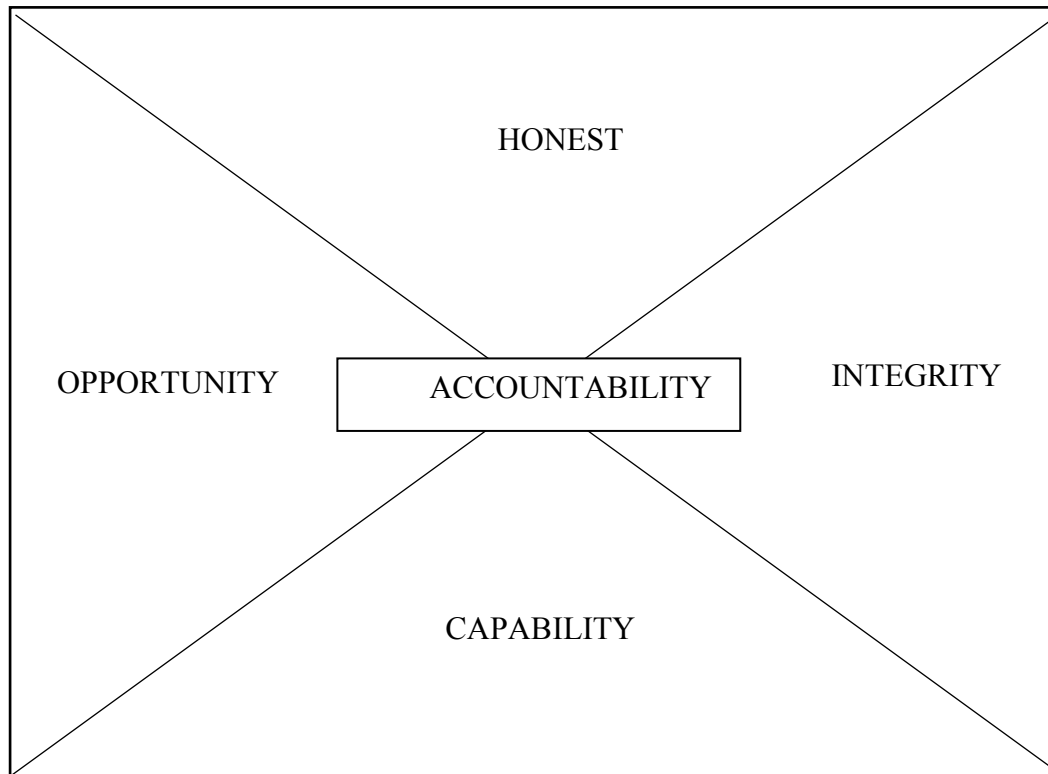
In addition, Abdullahi and Mansor (2015) supported that clever and knowledgeable employees who knew the importance of maintaining strong ICS could act as masterminds of fraud. Particularly, the study argued that employees could apply the knowledge acquired to circumvent organization's systems of control by deceiving individuals who are authorized to restrict access (Wolfe & Hermanson, 2004).

To counter bottlenecks in the Diamond four factor fraud model, Free (2015) developed fraud pentagon model. Mohammed, Khair and Simon (2015) explained that fraud pentagon added two elements to the original fraud diamond theory. These two elements are egotism and adeptness (Cressey, 1953). Egotism is the situation where employees make unreasonable decisions by circumventing organization policies and procedures while adeptness refers to use of acquired knowledge and skills to by-pass internal procedures in order to commit fraud. In support of the two elements explained in the fraud pentagon model, the study by (Mansor and Abdullahi, 2015) identified other individual influences which could perpetrate fraud in the organization. These elements include: employee position, intellect and self-esteem. In addition, the study noted that top executive needs to establish other underlying factors that could influence fraud internally instead of personification of the war on fraud to a few people who they perceive to be scheme initiators (Lenz & Graycar, 2016).

Although fraud model has continuously been modified to add new insight to fraud control, the war on fraud eradication is far from the reality. Most of the improved models may not eliminate fraud in totality. This is because most of the aspects appear to justify the reason why and how fraud occurs without paying more attention to fraud

control. Earlier models ignored the contribution of national values in fraud control. For instance, chapter six of the Kenyan constitution could be regarded as an additional element of Diamond four factor fraud model. The researcher therefore suggests a model which embeds Kenyan's national values and benefits Kenyan system termed as: NAVAHI that stands for NAV – National Values; A = Accountability; H = Honesty; and Integrity. This model can be regarded as an extension to Diamond Fraud Model. All additional fraud models need to accommodate National values enshrined in chapter six of the Kenyan constitution. Therefore, the new model can be christen as 'The Kenyan Fraud model' as shown in figure 2.3.

**Figure 2.3:** *Kenyan Fraud model*



To satisfy chapter six of the Kenyan constitution, Kenyan citizens are required to acquire tax compliance certificate, certificate of good conduct from department of criminal investigation, clearance from Ethics and Anti-Corruption Commission, clearance from Higher Education Loan Board and a report from credit bureau. These documents may be acquired honestly or fraudulently but may never play any role in fraud control. Therefore, chapter six may not control fraud in totality, unless the systems of governance are tailored towards fraud eradication. For, example, the current social structures do not inquire the source of employees' riches or wealth. Many public servants acquire resources within a short period but lifestyle audit is not done continuously. Civil servants and public officers make a declaration of assets and liabilities every two years but the report has not contributed much in fraud control. Rich persons are also recognized and bestowed with respect and honor regardless of how they acquired their wealth. Actually, society is firmly rooted to fraud than ever

before. Thus, general public has been plunged into materialism which has made fraud a custom in Kenya.

The researcher's model supports that chapter six of the Kenyan Constitution could be used to control fraud if it was aligned to the systems of governance. Even if organizations could employ the best policies to eradicate fraud, employee needs to avoid dishonest behavior. However, it is disgusting to note that policies that contravene public ethics might be embraced by County Governments in Kenya. The Kenyan fraud model clearly illustrates that government institutions lack machineries to enhance transparent culture. For instance, the principle of accountability could enhance economic growth because it defines the type of leaders required in a country. Kenyan fraud model supports the idea of good corporate governance which ensures that society is free from fraud (Anandarajah, 2001). However, good corporate governance has theoretically been politicized till it has lost meaning in developing countries as it is in Kenya where fraud occurrence is on the rise day by day (Anazodo & Igbokwe-Ibeto, 2015)

The present status quo can only transform if there is drastic change in the system of governance. Leaders should refute personal gain and aspire to serve humanity by avoiding fraud. In addition, organizations should support leadership that control fraud by upholding qualities of good leadership which is anchored on integrity, accountability and honest (Gbegi & Adebisi, 2014). Forensic accountants who are trained and qualified scheme detectors need to analytically examine all the fraud models in order to establish which one is effective in fraud control.

The Kenyan fraud model may be useful in explaining the reasons for present day increment in fraudulent actions. Many public servants use positions held as a



yardstick to perpetuate fraud. Sometimes, pressure to acquire wealth forces employees to forget virtues such as honesty, integrity and accountability. Kenyan forensic accountant can narrow the gap by considering 2010 promulgated constitution which has embedded chapter six to National Values. National government and County government could use Kenyan fraud model to evaluate the threat of fraud in the civil service.

Fraud diamond triangle theory examined the motive behind fraud which could either be financial, non-financial, socially or politically instigated. In addition, it was used to highlight various opportunities which can be prevalent in the county governments and how incorporation of forensic accountants could be useful in fraud control. Equally, Diamond Four Factor Model played a significant role in explaining how county government's employees rationalize fraud and reasons they give to justify fraudulent actions. The model supported other theories such as General Strain Theory which included strain in the fraud pentagon model. All the four variables were supported by the Diamond Four Factor Fraud Model. In order to control fraud, forensic accounting policies are necessary to counter deficiencies in Diamond fraud model which could be enhanced by incorporating fraud management tools. Lastly, to enhance the level of awareness on methods of forensic accounting, organizations needs to apply forensic accounting skills to incorporate essential attributes inherent in the Diamond Four Factor Fraud Model.

#### **2.1.8 Fraud Savvy Model**

Fraud savvy model has been credited as a more credible tactic to fight fraud in the public sector. The model is made up of six elements which can be used to deter fraud by disciplining perpetrators of fraud. These elements are made up of: moral rules, staff training, evaluation of threat and maintaining an elaborate internal control

system, fraud reporting and monitoring systems, proactive fraud detection method, investigation and prosecution.

Moral values are the first element in fraud savvy model. Moral values involve setting up ethical principles which can govern employees as they partake day to day activities in the organization. Adherence to set values could play a significant role in fraud control. Most fraudulent employees disregard ethical values due to greed and thereby acquire wealth illegally. Thereby, they ignore prudence utilization of resources for general economic growth. People charged with governance need to ensure that employees behave in accordance to the set values to ensure that there is accountability and zero tolerance to corruption. Therefore, fraud control would remain to be a dream unless moral rules are embraced by every employee in the organization.

Employee training is the second element in fraud savvy model. Employees training enable members of staff to learn and understand consequences of fraud. Equally, it enables employees to understand how they should react when there are allegations of fraud or purported fraudulent act in the organization. This is because employee training not only acts as a bridge to fraud discovery but also acts as an essential tool in fraud investigation (Chong, 2013). However, most employees seem to have been trained on fraud concealment instead of fraud prevention and reporting. It is in this back drop that forensic accountants requires to be incorporated in the organization because they have been trained to unearth fraud.

Risk assessment and maintaining of strong internal structures is also a major component in fraud control as per the Fraud savvy model. Institutions risk assessment process is critical in fraud prevention because it assists the top management in identifying areas which are susceptible to fraud. Maintaining strong internal

procedures is not an easy thing and therefore requires commitment from the top management. Organization managers needs to assess the organizations level of risk either monthly, quarterly, half-yearly or annually depending on the size of the entity or the nature of client's business. Every department needs to engage internal audit in order to evaluate the risk profile periodically. Heads of internal audit need to prepare a comprehensive risk evaluation report which should be presented to the audit committee annually. Adequate resources needs to be channeled to the audit department to ensure that there is timely delivery of departmental goals and objectives. Equally, continuous training on the purpose of audit should be strengthened to avoid perception of auditors as 'internal policemen'. This is because the work of internal audit is preventing widespread of errors and fraud before detection. In addition, auditor's role is to ensures that corporate policies and procedures are adhered to, which makes them to be a valuable asset in any form of organization.

The fourth element in Fraud savvy model is preparation and review of financial statements and reports. Once organization reports are prepared, supervisory team needs to ensure that all the supporting documents are properly attached to ensure that there is accuracy in finance reporting (Mangala & Kumari, 2015) Reports need to be prepared timely and should reflect the correct financial status of the organization. In case there are instances of fraud, correct tools should be used to unearth fraud incidences. Reporting of fraud should be done professionally to avoid victimization of innocent employees. This could be done by gathering accurate evidence and preparing timely audit reports which should be presented to person's charged with governance.

Application of proactive fraud detection methods is the fifth element in the Fraud savvy model. Every organization needs to ensure that it has proper fraud control

mechanisms which have been put in place. If fraud is not detected at the initial point, fraud losses and related pilferages will keep on accumulating as time goes by. The last component in fraud savvy model is enquiry and trial. Organization needs to come up with the best methods which can be used to investigate fraud. Similarly, top management needs to establish correct channels which can be used to communicate fraud to the law enforcement agencies. Thus, organization managers needs to take legal action against fraudsters (Chong, 2013).

Fraud savvy model was an essential component in the current study because Fraud is a multi-facet phenomenon which requires credible tactic to fight it. Nonetheless, fraud control may not be a function of a certain defined unit in an organization although many assume it is the work of internal audit. Therefore, incorporation of six elements of the Fraud savvy model in the County Government would avoid the blame game. Often, government external auditors believe that the scope of their work is defined by the statute and thereby do not play any role in fraud control. Therefore, they leave bulk of the work to internal auditors who are part of the management and sometime may be compromised. On the other hand, employee concerned with organizations security believe that their work is to man organization tangible assets by keeping off outsiders who might come with intention to steal.

Many security personnel detach from employee' related fraud and therefore may involve policemen before the court process begins. Similarly, organization management consider that their role is to increase shareholder's wealth, notwithstanding fraud may be committed anywhere in the organization. Finally, some employee believe that they do not know where to report cases of fraud because it could involve senior management which would make fraud control difficult. Therefore, Fraud savvy model was an important tool which could assist employees' to

develop right mindset in order to eliminate fraud in the organization. In particular, the model supported policies on forensic accounting which could be supported by the six elements in fraud savvy model.

## **2.2 Empirical Literature Review**

This reviewed literature from earlier studies related to forensic accounting and fraud control. It organized a concise and a brief but comprehensive outline of the literature with an aim of providing relationships between study variables.

### **2.2.1 The Concept of Fraud**

Fraud is an antisocial act which involves use of false information to manipulate innocent parties. It is perpetrated through cheating and false representations by limiting human ingenuity. There exist numerous definitions of fraud which vary from organizations to jurisdictions. The study did not aim at defining fraud but it adopted definitions from previous authorities to align the study objective (ACFE, 2012; Okere & Oladapo, 2018). The study adopted a narrowed but an articulated outlook of deceit to explain that fraud is an intentional exploitation of organization's financial and non-financial resources by the employees. Any willingly action done by staff of whatever cadre with an aim of personal gain can be termed as fraud (Drew & Drew, 2010). This was echoed by Pedneault, Sheetz and Rudewicz (2012) who stated that contemporary definitions of fraud emanate from cases law and relate fraud to be an act of conmanship. In particular, employees in the public service regard it as the gate path to riches and anyone who avoids it appears to be 'old-fashioned'.

Fraud could therefore be regarded as a social evil which could lead to diverse consequences to the individuals as well as organization. It is can be perceived as a disease that springs up when insatiable individuals gets opportunity to deceive. Thus, people charged with fraud examination can be compared to physicians diagnosing

signs and symptoms of particular disease in order to develop the right vaccines. Fraud can therefore be categorized under other classes of criminalities such as falsification of documents, fabricated study data and failure to declare taxes to the revenue authorities.

Fraud can be attached to a series of criminal acts which have been perpetrated by organizations across the globe. The financial crimes report to the public FBI (2006) gave various definitions of fraud that would be applicable to the contemporary world and incorporates other elements of fraud which have been recognized over the years such as: Deceit, dishonest, and robbery. A single fraud incidence can affect a village, location, sub-county, county and a country at large because it destroys budget lines which cuts across the entire sectors of economy. Nowadays, incidences of scheme are diverse and ever-changing. Therefore, there is need to develop skills which can be used to track culprits in order to deter fraud before it can occur.

White-collar fraud may involve an act of treachery which could be mastermind by organization's personnel, members of management team or other stakeholders who might be involved in the running of the entity. Fraud may create a problem to the audit department because most employees could use proxies as a cover up to ensure that audit trail cannot raise possible fraud red flags. Incidences of fraud in multi-national entities might be difficult to expose due to complexity of day to day transaction. In addition, there is no absolute assurance that fraud has been fully eliminated in the organization. This is because fraud exposure involves "use of opinions and analysis of samples by applying available information which may not provide a reliable conclusion unless other statistical and investigative techniques are engaged" (ISA, 2009).

Fraud encompasses deliberate and substantial falsification of information with an intention of cheating the other party (Hopwood, Leiner & Young, 2012). Fraud can also be regarded as an intentional misrepresentation which causes potential prejudice as a result of dishonest perpetrated by taking organization resources without proper authority (Baird & Zelin, 2009). According to ACFE (2016), fraud occurs when employees use public resources for selfish gain due to greed. Fraudsters usually display some illuminations which can assist the management to realize that they can perpetrate fraud. However, the degree of illumination may not be so pronounced because a substantial percent of the schemers may camouflage for a long time before getting noticed. In addition, most employees who commit petty fraud may be struggling economically which could not be realized easily by other colleagues (Baird & Zelin, 2009). Definitely, most organization cultures have thrown employee welfare to be a mere act of burial contributions which has eroded honest employee relationship.

Fraud manifests in a cloaked manner unless someone hints to the management that someone is conspiring to swindle organization resources, it may remain an act which is not fraud in the legal sense (Graycar, Van & Kelly, 2015). According to Hamilton and Gabriel (2012), the nature of the fraud depends on the understanding of the perpetrator and the ability to avert detection. The effort to counter fraud has been affected by mushrooming of new ways to perpetrate fraud which has grown hand in hand with increase in world population that has heightened the battle on fraud control (ACFE, 2016). Big forms of deception and petty forms of deception have been the main types of deception in the world today. Further, Nwankwo (2013) argued that fraud can be perpetrated externally or internally. Internal fraud may be committed by

members of staff and external fraud may involve outsiders such as traders and service providers.

According to Louwers, Ramsay, Sinason, Strawser and Thibodeau (2015), fraud can be perpetrated by entire organization. Organization form of fraud can be categorized as: corporate form of fraud and professional form of fraud. According to Singleton and Singleton (2010), corporate form of scheme can be perpetrated by the organization as a whole for its mutual benefit or loss. On the other hand, professional form of fraud can be perpetrated by employees who use positions held to misappropriate institutions funds (Nigrini, 2011). Further, Murphy (2015) advised that incidences of fraud may not be perpetrated by a few people, a section of the organization or the entire organization but might vary from one incidence to another.

In modern definition, corruption, fraudulent financial statement and asset misappropriation have been included in the classification of fraud (ACFE, 2012). Listed under the fraudulent action include inventory fraud, payment of salaries to ghost workers, technological fraud, misuse of assets and other office tools, abuse of office for personal advantage as well as misrepresentation of financial statements and reports (Mobolaji & Omoteso, 2009). However, studies reveal that asset misappropriation with cash as the target is the main type of fraud in many organizations' represented by over 85% of total fraud cases (Seetharaman, Sentivelmurugan & Periyannagam, 2004).

Fraud is not a new phenomenon and thus can be considered as the hobbyhorse of many deviant acts in the world. It can be back tracked to ancient times when people began to transact in exchange of merchandises for profit. The evolution of audit of financial transactions can be considered as a major milestone in detection of fraud (



Petrascu & Tieanu, 2014). Incidences of deceit and by extension fraud can be traced in the book of Genesis 27 verses 5-36 where Rebekah conspired with her son Jacob to walk away with Esau's birthright by means of misrepresentation although Esau's was the elder brother (Van der Wal et al., 2015). According to Petrascu and Tieanu (2014), as trading activities grew, instances of fraud rose up in tandem with record keeping practices. Since then, accountants have been working round the clock to come up with ways to safeguard institutions from fraud related incidences.

Although accounting is as a social tool which organization's use to present their financial statements and reports, probability of fraud cannot be ignored if organizations needs to earn their income in totality (Efiong, 2012). Stakeholders need to consider that accuracy in financial reports grows organizations assets and by extension capital base. These numerous needs make accounting figures extremely susceptible to fraud. Fraud can rarely be seen prior to its occurrence but symptoms of its perpetration are usually observed after the transaction has gone through the system (Oyedokun, 2015). The perceived symptoms and signs of occurrence of fraud does not necessarily conclude that fraud has been perpetrated since omission would have happen. Therefore, employees are required to be cautions to avoid false allegations.

A strong fraud control system would acts as a scare to fraudsters. Fraud control mechanism limits fraudster to access suitable targets thus preventing fraud from occurring. Indispensable attributes which crown fraud control may be discussed under Routine Activities Theory whereby there must be an incentive, chance and availability of rational object for fraud to occur. In situations where there is a capable guard to deter fraudsters from reaching attractive object fraud may be minimal. It is therefore fundamental for organizations to put up proper controls which can act as deterrence mechanisms for fraud. As echoed by Yar (2005) the presence of fraud control device

acts as a deterrence mechanism for fraud. Fraudsters get attracted to fraud due to lack of adequate structures to control fraud menace.

According to Pratt, Holtfreter and Reisig (2010), organizations are exposed to fraud due to routine activities performed by employees. Employee's may be involved in legitimate and normal office duties but might engage in transactions with fraudulent colleagues who might victimize them (Karmen, 2015). Fraud control mechanism might be in close proximity to the fraudster which would make them to understand organization operations in a given time period (Yar, 2005). The person or object which restricts fraud is very significance because it can send a signal to the fraudster that his/her actions are being trailed. Therefore, forensic accountants who are proficient in fraud exposure needs to be incorporated in the organizations to help corporate managers in enacting appropriate fraud control barriers (Willison & Backhouse, 2006). Many organizations across the globe have become victims of employee's fraudulent actions as a result of inability to secure financial information which may open a lacuna for fraudsters. Choo (2011) affirms that organization employees have greatly contributed to fraud in the world today especially in government institutions due to the inability to control it.

Organizations cannot prevent fraud at all levels because it is not possible to customize and configure all the activities. Some organization activities may be done in haste or under resource constraint which could be an impediment in fraud control (Samonas, 2010). To some extent, opportunities for fraud may come up as a result of weak organizational procedures that could create a gap for fraud. For instance, measures such as restriction of access to unauthorized personnel may appear on the organization's door post with little enforcement. In addition, top management who are required to ensure that there are no incidences of fraud may also mastermind fraud

and go unnoticed. In particular, most incidences of fraud may occur during the handover process where out-going personnel may victimize incoming employees. (Cummings et al., 2012).

Normally, executives may allow employees who do not carry any responsibility to act on their behalf based on trust and therefore fraud might occur. For instance, busy supervisors may become victims of trust when they give certain rights to junior staff whenever they are engaged in other official activities. Equally, managers might abuse their powers by delegating responsibilities to junior staff which could override existing controls resulting to fraud. Although organizations may grant some rights to junior employees they need to check periodically in order to re-examine how these rights have been used to achieve institutions objectives. Otherwise, ineffective audit of the given rights might give room for naughty employees to take undue advantage. In the era where organizations are running towards digitalization, trust is paramount because employees may act independently based on unrestricted powers to resolve emergency issues in the office. Nevertheless, building confidence in someone is a two-edged weapon, once it is given without adequate monitoring and supervision it may definitely lose its meaning (Samonas & Angell, 2010; Samonas, 2010).

Fraud control entails two pertinent areas; fraud deterrence and fraud exposure. Deterrence of fraud mainly encompass actions taken with an aim of eradicating probability of occurrence of a fraud while fraud exposure entails taking prompt action to detect loopholes for fraud when it has already occurred (Bolton & Hand, 2002). Past studies have indicated that fraud deterrence is the most efficient way to avert finance loss in the future. Further there are no defined ways which can be used to eradicate fraud in entirety because it is ethical based, but continuous training on the

dangers and consequences of fraud can be a sure remedy (Adams, 2006; ACFE, 2010).

One of the most interesting faces of fraud exposure is that in the intermediate time span it may take approximately 18 months to discover fraud, and pretty a few cases of fraud could last for more than two years and then die slowly. Fraudulent acts such as altering of payments and irregular statements of accounts may be exposed after a long period which could take more than two financial years unless investigative audit is done frequently (ACFE, 2010). Commonwealth report (2013) argued that majority of the fraud incidences could be exposed by internal customers but some employees may collude with supervisors to conceal incidences of fraud which has become a custom in the public service. A study conducted by Ramaswamy (2007) indicated that weak operational procedures as well as ineffective internal controls could create a compromising fraud environment.

Therefore, managers should develop tight fraud alleviation mechanisms that integrate forensic accounting in order to win the war against fraud (Hamilton & Gabriel, 2012; Enofe, Okpako, & Atube, 2013). Fraud concept was an essential aspect in the current study because it acted as an eye opener to the origin, forms and present day fraud and how forensic accounting could be incorporated to fight the menace.

### **2.2.2 Outlook of Forensic Accounting and Fraud Control**

In the previous decade, they have been tremendous development in the field of fraud investigation which had focused on the role of forensic accountant. Forensic accounting is a specialized profession born from the need to conglomerate features of accounting to the field of investigation that is not biased to financial and economic crime but also puts a lot emphasis on quantifiable verification of the probable cases which could be upheld in the court of law (Pogliani, Pecchiari & Mariani, 2012).

To vividly comprehend and understand the field of forensic accounting, someone is required to understand foundations for present day investigative accounting. Forensic or investigative accounting can be explained as a special field of accounting which emanates from engagements on anticipated litigation. It is also known as investigative or fraud audit or judicial accounting and therefore can be considered as the merger of accounting, auditing, investigation and law. According to Crumbley, Heitger and Smith (2009), the word “Forensic” means “essential and useful in a court of competent jurisdiction,” meaning that a competent and a qualified forensic accountant can use the evidence in a court of law. Investigative accounting or Forensic accounting can be defined as a science of applying bookkeeping principles and techniques to obtain evidence which can be used to investigate and prosecute fraudsters in an open and transparent judicial process (Dhar & Sarkar, 2010).

On the other hand, Modugu and Anyaduba (2013) argued that the discipline of forensic investigation/ accounting involves compiling of evidence from organization’s financial records to gather information that can be relied upon to prosecute fraudsters. The most important role of forensic accountant is to establish whether evidence gathered by auditors’ is enough to support criminal proceeding (Bhasin, 2007). Equally, Coenen (2005) stated that forensic accountants may apply book-keeping methods’ and practices to solve problems related to law. Okoye and Gbegi (2013) further argued that investigative accounting could involve fraud reporting, whereby accountability report is produced so that it can support the court process. In addition, Howard and Sheetz (2006) defines investigative accounting as summarizing and presenting financial issues in a court of law as an expert witness. Similarly, Okoye and Gbegi (2013) argued that judicial accounting is used to establish whether people in the organization participate in legitimate or illegitimate activities.

Literature is comprehensive with numerous descriptions for forensic accounting. Although forensic accounting originated in early 1800s, the literature reviewed does not give it distinct characterization. However, forensic accounting entails application of audit techniques to solve problems concerned with misappropriation of funds (Chimwene, 2017; Evaz & Ramazani, 2012). This echoed assertion by ACFE (2010) which explained that forensic accounting involves incorporation of public laws to bookkeeping principles in order to establish the loss accrued as a result of fraud. Forensic accounting therefore entails preparation of reports whose facts can be relied by a magistrate or a judge (Crumbley, 2008).

Several people have not embraced investigative accounting or forensic accounting though it originated in the early part of the 1800s. Mitric, Stankovic, and Lakicevic (2012) indicated that the practice of forensic accounting could be dated back to 1817 where the testimony of an accountant could be used to make decisions under bankruptcy act. For instance, Scottish accountant used forensic accounting during trade negotiations in the 1820s. Several articles have explained how expert testimonies were used in trade dispute arbitration in the late 1800s and early 1900s. However, “forensic accounting” was used widely by Kautilya who came up with several methods of funds embezzlement, but the term was later coined in 1946 by Peloubet (Joshi, 2003; Crumbley, 2001).

Forensic accounting can further be traced in the days of Pharaoh in Egypt where forensic accountants acted as eyes and ears to watch over pharaoh’s inventories of grain, gold and other assets (Crumbley et al., 2007; Singleton & Singleton, 2010). Accountants were tasked with the role of manning the accounts and in case fraud could occur a legal process would begin. Birbal who was a famous accountant of the time suggested that there was need to add new tricks to investigate crimes related to

account in the Moghul Emperor (Dorrell, 2012). During the World War II which was around late 1940s, forensic accounting was gaining prominence although it had no formalized procedures. However, it was in 1980s when majority of research studies were published in forensic accounting (Dreyer, 2014). Thus, Forensic accounting is hardly a fresh discipline, only that it distinguishing mark and immense usage has been revealed recently. Early studies argued that forensic accounting had not been fully recognized by account scholars as well as users and preparers of financial reports notwithstanding the general public (Kabue & Josiah, 2017). Nevertheless, many nations are yet to grow this profession even though they need it badly.

Forensic accounting is growing very rapidly and has become an acceptable profession in the developing countries. Many African countries rely on developed countries for training as well as certification. According to Okere and Oladapo (2018), from 1980s a number of western countries especially USA have recognized forensic accounting has an emerging field of accounting profession with characteristics of auditing, accounting and investigation. Assertions by Owojori and Asaolu (2009) depicts that forensic Accounting aims at detecting and investigating financial frauds, legal process support and dispute resolution.

The most distinguishable character of a professional fraud investigator is that he/she can analyze business data judgmentally to establish whether apprehensive transactions exist (Arokiasamy & Cristal, 2009). This was supported by Wells (2013) who agreed that forensic accountants summarize and presents sophisticated information by use of models to get reliable evidence. Nyagudi (2019) confirmed that organizations need to link information to intuition which has been deficient in traditional accounting. Forensic accounting reduces the probability of fraud occurrence compared to normal accounting because it incorporates intuition during fraud investigation. Therefore,

organizations need to engage forensic accountants because they can review evidence contained in the office journals and other documents to establish whether physical or electronic evidence exist. According to Price Water House Coopers (2014), forensic accountants measure the damages at hand in respect to all the parties and later devise ways to resolve the problem before it gets to the jury.

The work of forensic accountants is to settle matters related to fraud out of court by making recommendations which can stand test of time (Crumbley, 2010). They critically analyze financial transactions so that they can give correct advice to the management. They estimate the value of goods acquired in the organization in order to ascertain whether irregularities and outliers exist which could be indicators of fraud (Arokiasamy & Cristal, 2009). According to Weygandt, Kieso and Kimmel (2008), the main duty of forensic accountant is to detect possible red flags. Thus, forensic accountants can be compared to investigation officers in the private and public sector because they can be used to expose finance scandals across the globe.

Forensic accounting is made up of attributes which are independent from other accounting discipline (Thornhill, 2012). As stated by Hopwood et al., (2012) forensic accounting contains certain attributes which may not be found in auditing. For instance, forensic accountant relies on the evidence obtained without giving opinion as it has been the norm in traditional accounting. Forensic accounting contains other unique elements such as fact-finding ability. Therefore, forensic accountant has capacity to understand what he/she should do at any given time and also preserve the right evidence.

According to DiGabriele (2010b), auditors believe when there is strong internal control system, uncertainties and material errors are unlikely. However, forensic



accounting techniques are more holistic compared to auditing because they are tailored towards problem solving unlike audit which is guided by structured plan and does not play much role in fraud control. Crumbley (2008) argued that forensic accountants apply fact-finding principles to collect data which can be used by experts to prove whether fraud exist for legal process to begin. Forensic accountants use hard copy and soft copy documents as well as interrogation of officers to collect evidence in order to identify who might be culprits in the organization (DiGabriele, 2010b). Thus, because of proficiency of their work, forensic accountants can be perceived as a sandwich of a private investigator and a competent auditor. In some countries forensic accountants are used to recover ill-gotten wealth such as fraudulently acquired land and buildings, vehicles and other assets irrespective of whether they are tangible or intangible. For instance, in developed countries and a few of developing nation's laws have been enacted which can bring fraudster before the court and convict them so that they can recover every coin in its entirety.

As the world struggle with increased fraud incidences, accountants whose professional duty is to safeguard organizations assets needs to team up with experts in order to come up with ways to counter fraudsters (Owojori & Asaolu, 2009). In particular, organizations need to engage forensic accountant because they have knowledge on asset survey which could be useful in physical examination of assets and documents to expose fraud (Huber, 2012; Eiya & Otolor, 2013). Thus, forensic accountant can inspect documents and interview employees involved in asset control. Thereafter, based on their comprehensive report, concrete and standard advice can be given to the owners or management in order to thwart any future fraud incidences in the organization.

According to Eiya and Otalor (2013), forensic accountants assist in fraud control by incorporating a multi-disciplinary approach to fight fraud. For instance, they use lawyers, engineers, valuers, architects and other professionals to forensically examine any form of document. In addition, internal auditors are employees' of board of directors and by extension senior management and may cover up fraud to secure their jobs. Due to this, some organizations may engage forensic accountants to prepare financial reports and statements in order to streamline financial reporting policies. Thus, fraud can be alleviated by examining financial data forensically which is a hands-on approach to fraud control because it reinforces objectivity of external auditors and internal auditors (Steve, Chad, Conan, & Mark, 2011).

### **2.2.3 Forensic Accounting Policies and Fraud Control**

Forensic accounting policies have been defined in many ways by a number of scholars who had varied schools of thought. The journal of Business Ethics on whether corporate tax avoidance is a socially responsible defines forensic accounting policies as rules and regulations which enable employees to work as per the laid down procedures to avoid mistakes (Dowling, 2014). Similarly, the study by Ngwenya and Munyanyi (2015) in Zimbabwe explained that forensic accounting policies are step by step directions followed by organization to scrutinize financial and non-accounting procedures to establish whether they comply with laid down rules and regulations. The journal of regional formation and development studies by (Verovska, 2014) on the contribution of ICS in development of stable company, pointed out that policies on forensic accounting could be used to increase organization's resources by maximizing shareholder's wealth in order to create a competitive edge.

Substantial literature as related forensic accounting policies to fraud control. A CPA Journal on need for mandatory disclosure found that many public and private

organizations often review financial and reporting policies to deter and prevent fraud (Kranacher, 2011). Similar sentiments were echoed by Guo, Huang, Zhang and Zhou (2016) who confirmed that organizations need to manage internal structures in order to discover fraud incidences by implementing policies that can maximize firm's value. A fundamental policy for fraud prevention was section 304 of SOX 2002 which pronounced that organizations' need to be responsible for mistakes that appear on the financial reports. In particular, Sarbanes-Oxley Act of 2002 gave directions for averting future incidences of fraud by pointing out that board of directors and chief executive officers were to be held responsible for fraudulent acts and should compensate the organization in case fraud occurred (Amadeo, 2017).

In Kenya, county governments were required to establish audit committees as per the Gazette notice of April 16, 2016. Many county Governments have adhered to these directive but it has not borne much fruit on fraud control. The journal of internal Auditing by (Laxman, et al., 2014) asserts that financial statements fraud has been a major problem in many entities due to ineffective policies from audit committee's members. Most audit committee members may be driven by greed and thereby create loopholes for fraud through collusion with management. The study by Opromolla and Maccarini (2010) on the banking sector's internal control systems in Italy, pointed out that the sole purpose of internal fraud alleviation policies is to deter perpetration of fraud by ensuring that organization managers have a right mindset that can enable them to monitor all activities in the organization. In particular, they argued that board of directors as well as management team need to establish and maintain robust fraud control policies in the organizations.

According to Church and Mcmillan, (2001), the implementation of robust internal control policies can act as the initial point in fraud prevention and detection. This is

because institutions' procedure policy plays an essential role in fraud exposure. This was echoed by Kulikova and Satdarova (2016) who argued that procedure policy acts as guide for preparing organization reports in order to indoctrinate acceptable morals. The academy of accounting and financial studies journal maintained that organizations need to set up quality assurance department to evaluate perceived bottlenecks in order to take prompt corrective action (Thevenot & Hall, 2011). For instance, the study by Hardouin (2009) on governance in banks and public-private partnership established that suppliers may collude with organization management to perpetrate fraud due to ineffective procurement policies. Lack of adequate monitoring and evaluation of procurement process may lead to insurgence in fraud incidences. To ensure that procurement process is efficient, organizations needs to develop and implement proper procurement and finance policies (Hardouin, 2009). Though, quality control may not eradicate fraud in its entirety, fraud may occur as a result of negligence, poor human judgment and input errors which can be controlled by the management. Therefore, organizations should ensure that they incorporate proper policies because fraud control policies can be used to expose more than a quarter of the fraud incidences (Laxman, et al., 2014). The tenth edition on accounting review by (Hoyle, Schaefer and Douphik, 2011) in Edinburgh UK reported that lack of adequate policies on fraud control may increase incidences fraud. The study specifically emphasized that policies that controlled employee behavior were urgently needed in many organizations. To ensure organization policies are adhered to optimally, supervisors needs to monitor activities of all the staff irrespective of whether they are permanent or on contract (Kennedy, 2018).

Policies on corporate responsive behavior and employee working atmosphere are also essential in fraud control. This is because behavior assists organization management

to critically analyze present gaps which can be useful in policy review. For instance, Kingsley (2012) made a study on fraud in the banks of Nigerian and established that employee working environment could be useful in the implementation and review of organization fraud control policies. The study specifically established that employees' working environment enhances open communication which is important in fraud control. In addition, the study emphasized that effective communication may assist employees to discuss fraud related issues informally which may send a signal to fraudulent staff that 'someone is watching their steps'.

The study by Stephanie (2016) explained that timely and efficient monitoring of organization policies could help in fraud alleviation. This was in agreement to the study by Prabowo (2012) on fraud control in Indonesia who urged that continuous review of financial and non-financial transactions could help employees to establish possible bottlenecks which could disrupt fraud control. ACFE (2016) argued that routine review of organizations activities could assist public and private entities to eliminate fraud in totality. Equally, the report supported that government organizations should not assume that all employees are working to achieve institutional goals but should monitor every employee to ensure that none perpetrates fraud (Ozili, 2015). In particular, management team was to ensure that all employees behave ethically to deter any form of fraud. For instance, policies and regulations on approvals, endorsements, reconciliations and authentication of documents should be made mandatory in all organizations.

Australian accounting journal by Rae, Sands and Subramaniam (2017) agreed that policies on segregation of duties needs to be enhanced because they build organization's internal control system. For instance, organization management should set up fraud control plan which should be cascaded downwards from top management

to junior employees. Fraud control plan helps organizations to detect incidences of fraud and at the same time prevent insurgence of fraud incidences. County governments needs to enact robust fraud control plan which can develop timely solutions to any form of fraud. The Board of Directors and management team must exhibit high degree of morality by ensuring that all employees adhere to organization's fraud control plan (DiNapoli, 2010). Organization's that follow guidelines laid down on fraud control plan are able to attain departmental goals and objectives (Lail et al., 2013). On the other hand, organization's where fraud control plan appears weak, fraud control might be trivialized. These attitudes may often lay a groundwork for a low or high risk fraud environment.

Gathered literature on forensic accounting policies is considered adequate by the researcher to support that forensic accounting policies play a significant role in fraud alleviation. With existence of scanty or no past studies related to forensic policies and fraud control in Kenyan perspective, the few reviewed studies have adequate findings to define the study gaps which were to establish extent to which forensic accounting policies influenced control of fraud in county governments in Kenya. The empirical literature reviewed has identified gaps to fill which include: extent to which fraud control plan influence fraud control, contribution of zero tolerant policy on fraud control, influence of fraud reporting policy on fraud control and importance of inventory updating on fraud control. The study gaps are based on Routine Activities theory and Fraud Savvy Model. Routine Activities theory supports that employee's day to day activities play an essential role in increasing or reducing incidences of fraud in any form of organization. Therefore, management needs to incorporate suitable policies which can forensically examine organization's routine activities to

deter perpetration of fraud. Equally, organizations need to follow the six elements in the Fraud Savvy Model to set up policies which could be useful in fraud control.

#### **2.2.4 Fraud Management Tools and Fraud Control**

Fraud management tools involve activities and actions which are taken to bar occurrence of fraud. The study by Power (2013) on apparatus of fraud risk defines fraud management as re-organization of internal procedures, analysis of threat of fraud and review of management practices that eradicates incidences of fraud in the organization. Fraud management tools allow organizations to identify areas susceptible to fraud. These tools may not necessarily be used to investigate the motive or purpose for fraudulent action but could be used to identify possible fraud red flags.

Recent studies regard fraud management tools as fraud deterrence techniques that can be used to detect and to some extent useful in prevention of fraud (Biegelman & Bartow, 2012; Morales, Gendron, & Guenin-Paracini, 2014). Studies affirm that organizations that have effective fraud deterrence structures must develop correct tools to expose incidences of fraud in the organization. In Australia, a guide from COSO model was developed in 1992 which recognized control environment as an essential tool for managing fraud in private and public sector (Rae, et al., 2017). A study by Laxman, Randies and Nair (2014); Behrend and Eulerich (2019) argued that organizations' control environment could be used to evaluate the effectiveness of fraud control tools. According to the study by Verovska (2014) on the importance of ICS on developing effective and stable company, it was established that organization's control activities could act as the initial point in the development of fraud control tools. Many countries have used accounting bodies to advice governments and other institutions on the importance of control activities in the

organization (Rae, et al., 2017). Therefore, organization managers should enhance their control activities in order to alleviate fraud by using correct tools.

Thus, the outburst of fraud and fraudulent acts has made fraud management tools an embryonic theme to academicians as well as practitioners. Studies by Modugu and Anyaduba (2013); Whitcomb and Jost (2006) in Nigeria produced different results but supported that use of fraud management tools could help in fraud alleviation. Similarly, the study by Boateng, Longe, Mbarika, Aveyor, and Isabalija (2010) on forms and implications of criminal behavior in Ghana indicated that many organization's lack technical expertise which is required to fight fraud. Alabdullah, Alfadhil, Yahya and Rabi (2014) supported that forensic accounting was essential in fraud alleviation. However, they pointed out that fraud control required application of sophisticated tools to detect camouflaging patterns of fraud. Therefore, fraud management tools need to advance continuously in concurrent with growth in technology.

According to ACFE (2014), the most frequently used fraud management tools includes: information from employees or outsiders, sanctions from management, exposure by internal audit office, surprise checks, preparation of bank reconciliation statements, inspection of documents, engagement of external auditors, use of surveillance equipment, involvement of Directorate of criminal investigation, self-confession and application of Information Technology. However, in consensus to findings by ACFE (2010) most fraud management tools involve application of responsive measures to combat fraud other than tactical approaches. Thus, it's sensible to establish how forensic accountants can apply fraud management tools to combat fraud and at the same time find out how forensic accountants can use fraud management tools to control fraud as a responsive measure. Though the study by



Bierstaker et al., (2006) opined that some earlier studies revolved around efficiency of fraud management tools with no direct link to fraud control, the objective sought to establish the contribution of fraud management tools on fraud control in order to bridge the gap.

The study by Adams et al., (2006) on why deterrence of fraud is an investment to the organizations argued that application of fraud management tools was an important measure which could be used to prevent losses as a result of deception. This was because organizations whose resources are taken by fraudulent means may unlikely recover from the losses in the foreseeable future. At the same time, the study by Johnson and Rudesill (2001) affirmed that there are no fixed ways which can be used to eradicate fraud in totality, but with proper use of fraud management tools, entities can reduce losses that accrue as a result of fraud. In addition, findings from European review by Krummeck (2000) on the role of ethics in fraud control pointed out that fraud management tools need to be used ethically because failure to do so, they may be rendered useless.

For effective management of fraud, organizations risk management framework must be orderly, organized and well-timed (McNally, 2015). The study by ACFE (2014) established that fraud management tools may be pretty operative; nonetheless small entities may be extremely affected by occupational fraud compared to larger organizations. This is because small organizations could violate rules on internal controls where a single employee could perform a number of functions. Additionally, a small organization could not afford sophisticated equipment's compared to large enterprises. For instance, information communication technology has widely been used to prevent fraud in small organizations but most people may use computer technology negatively which may increase incidences of fraud and the level of risk of

fraud. The study by Wanjohi (2014); Pearson and Singleton (2008) on application of genetic algorithm to prevent fraud by use of credit card revealed that numerous fraudulent acts may be perpetrated through the digital platforms. The studies argued that application of computerized fraud management tools to spot and mitigate technology driven fraud could reduce the level of risk in the organization. Cognizant to assertions by Gilmore-Allen (2015) on techno fraud in small and medium enterprises, application of technology could keep organizations on their toes by identifying areas prone to fraud.

Use of modern technology to monitor unstructured data has also been identified as an essential method which organizations can use to identify loop holes for fraud. This is because blue-collar crime may be executed through computer work stations which might overwhelm traditional accounting methods for fraud control. For instance, the study by Stone (2016) disagreed on online access to court records in United States of America where they argued that most professional accountants could not maintain digital evidence during fraud investigations due to intricacy of computerized audit techniques. Therefore, forensic information technology techniques need to be incorporated in the organization to establish whether there is compromise of rules during application of computer system (Phua, Lee, Smith & Gaylor, 2005). It is evident that accountants may mishandle digital data before specialist can investigate occurrence of fraud. Thus, fraud experts need to restrict access to documents which appear suspicious. This is because experts in fraud understands how digital evidence is preserved by use of forensic accounting techniques (Stone, 2016).

Sophisticated techniques can also be applied in auditing to expose fraud suspects and arraign the culprits in court by supervising employees, seeking search warrants from police and other investigation agencies and obtaining information from whistle

blowers. Supervision methods may include general observation of employees as they partake their duties or physical examination of soft copy and hard copy documents. The study by Beach and Schiefelbein (2014) on possible fraud warning signs pointed out that surveillance can be done by watching what is done routinely in the organization and sometimes fraud experts can examine suspect's trash forensically.

Studies by Gray and Debreceeny (2014) argued that use of mathematical model could be used in forensic accounting. Therefore, data mining functionality can be used to unearth abnormal operations in the organization. For instance, in the year 2012 auditor general of Malaysia pointed out that use of CAAT's as an analytic tool could help forensic accountants to interpret camouflaging patterns in fraud incidence. The paper by Davis and Silverstone (2010) pointed out that tradition accounting tools may not be efficient in fraud control because they may not incorporate 21<sup>st</sup> century changes in business environment which require application of modern technology. This was further supported by Singleton and Singleton (2010) who argued that organizations should incorporate sophisticated accountings tools to prevent and detect financial fraud, and if possible, set up a networked forensic laboratory.

Job rotation and mandatory vacations can also be classified under traditional fraud management tools. A report by ACFE (2016) confirmed that mandatory vacations and Job rotation have been applied in approximately 20% of the organizations across the globe. The study by Kapp and Heslop (2015) suggests that organization duties and responsibilities needs to be apportioned to employees at varying time periods to make fraud cover-up difficult. Therefore, employees should be encouraged to go on leave to avoid domineering of organization operations by a few individuals. Equally, organizations should establish effective welfare departments to assist needy employees during difficulties to deter perpetration of fraud. This was in agreement

with the study by Majid, Mohammed, Omar and Jomitin (2014) on risk of fraud in banking sector which supported that employees need to go on leave in accordance to human resource policy to deter perpetration of fraud. In particular, Mustafa, Mohamed and Said (2017) argued that top management should act as pace setters by ensuring that they handover to the immediate staff when on leave. This was further supported by Glodstein (2015), Klein (2015) and Stone (2016) who made a study on how employees embezzle organization resources and established that delegation of authority should be done to ensure that people who process payments do not approve or authorize transactions. Equally, Kazemian, Said and Nia (2019) pointed out that organizations should isolate finance and procurement functions from user departments in order to avoid collusion.

Traditional auditing techniques may not fully control fraud because they may not replicate up and down trends in the business environment. The paper on ‘computer forensics by Smith (2005) pointed out that professional auditors may not possess techniques which would be used to prevent upsurge of fraud in the governments’ institutions. For instance, the study by (Ahmed, 2003) on application of information technology in universities’ accounting units in Britain found out that most statutory auditors have no expertise as well as requisite techniques to control fraud. Specifically, the study noted that criminals may hide behind technology and accounting principles to commit mega fraud incidences without getting noticed (Ahmed, 2003). This therefore implies that present-day fraud necessitates application of modern tools to expose it which can be done through use of modern fraud management techniques. In Particular, the study by Ejike (2018) on whether forensic accountants in Nigeria supported litigation process, it was revealed that innovative technologies allowed investigators to recover destroyed records, crack extract from

encryptions and sort out all the data conclusively. However, the main drawbacks in application of forensic information technology in the county government in Kenya is that the constitution does not incorporate real-time use of information technology in all governments accounting and procurement system.

In pursuit for remedy against fraud, fraud risk register was launched in United Kingdom making it an essential tool in fraud control (West, 2014). This study argued that use of fraud risk register minimizes incidences of fraud and at the same time prevents organizations from being exposed to fraudsters. Fraud risk register enable organizations to establish possible fraud red flags which can occur. From Kenyan perspective, major fraud red flags include; kickbacks, lavish lifestyle, living beyond one's means, shrewd behavior, accumulation of leave days and 'don't care' attitude (Mangala & Kumari, 2015).

Internal controls are also a traditional fraud management tool which has been on use since the time of memorial. Internal controls encompass all activities which restricts access to organization's system and other assets. Findings from the study by Keszthelyi (2013) established that password is one of the common and widely used internal control technique. However, the study noted that password is prone to cracking by an operative system in a few seconds. Basic guidelines for password is that the secret word should be: quick-to recall, impossible-to- speculate, based on peculiar semantics, changed often, considerably long and restricted to the bearer of the password. Nonetheless, amidst this controls, some knowledgeable attackers such as Trojan horse key logger may copy the password by selecting the content online (Keszthelyi, 2013). This has therefore made traditional fraud management tools less efficient because fraudulent activities may be exposed by responsive rather than proactive measures. Results from the study by Nigrini (2011) on methods and

techniques for forensic investigation established that over two thirds of fraud incidences could be discovered in the organization. However, the study established that only a small number could be exposed by auditors while other incidences could be noticed after organizations' apply pre-emptive measures to control fraud. Thus the results depict that only a small percentage of fraud incidences could be controlled by internal controls.

These objectives endeavors to augment existing information on fraud control, fraud management tools and the relationship between fraud management tools and fraud control. In addition, qualitative studies done will enrich the extant literature on fraud. Similarly, the study's empirical review identified the research study gaps related to fraud management tools and fraud control in a number of the organizations across the globe. The research objective was guided by deterrence theory since it was evident that monitoring people's actions would result to some consequence depending on the tools used (Nagin & Pogarsky, 2001). In addition, the researcher used resolved Action Theory to define the study gaps for these objective and concluded that County Governments needs to make resolutions on which tools should be used to control fraud because some people might decide to use traditional fraud management tools instead of using modern fraud management tools which can eliminate fraud in totality. In conclusion, the study gaps identified assisted the researcher to understand the extent to which fraud management tools could be used to deter fraud in the County Governments in Kenya.

### **2.3.5 Degree of Awareness on Methods of forensic Accounting and Fraud Control**

The upsurge of business scandals in the current age has raised awareness on methods of forensic accounting and responsibility of auditor in fraud control. Regrettably, the rate of recurrence of financial and non-financial fraud has not dropped amidst

developing of Sarbanes-Oxley Act in United Kingdom (Hogan et al., 2008). It is wrong to believe that there is little empirical evidence done on the degree of awareness on methods of forensic accounting in industrialized and emerging economies. For instance, the study by Rezaee and Wang (2018) on the relevance of forensic accounting indicated that forensic accounting methods needs to be assimilated into the business education curriculum to enhance awareness of forensic accounting education and practice. Equally, the study by Bonita, Micheal and Georgiy (2016) on the opinions of instructors and practitioners on forensic accounting education argued that universities need to introduce units on investigative and forensic accounting to enhance the level of fraud awareness. For instance, the study by Seda and Peterson-Kramer (2014) revealed that institutions of higher education in the United State of America offered forensic accounting courses which has made western countries global leaders in fraud control.

Rezaee, Crumbley and Elmore (2004) made a survey of academicians and practitioners and found out that forensic accounting would be relevant to accounting students, academicians as well as practitioners because there are substantial differences between hands on forensic accounting training and theoretical method of training. According to the proceedings of Eurasia Business Research Conference in Bahrain by Abdullah and Sutan (2014), fraud awareness has faced many barriers across the globe because there is no clear link between training method and practical approach to forensic accounting. Lee, Cefaratti, and Rose-Green (2015) established that persons who had acquired training in forensic accounting were more creative than people' who had acquired training on traditional methods of accounting. Likewise, the study by Johnson-Rokosu (2015) on the relevance of forensic accounting training in institutions of higher learning in Nigeria revealed that incorporation of fraud and

forensic accounting in accounting curriculum could strengthen employees' expertise, level of skepticism and fraud judgment.

Pitt (2009) tried to examine the contribution of culture on economic growth of a nation and established that most organizations collapse because of unethical behavior at the workplace. The study noted that most organizations get exposed to fraud due to lack of requisite measures to curtail deceit. The findings from the study done by Domino, Wingreen, and Blanton (2015) on the attitudes of corporate accounting professionals revealed that the system of governance may affect employee behavior which could reduce the level of fraud awareness. Thus, the study pointed out that dishonest employees may create a high-risk environment which may be prone to fraudulent behavior. On the other hand, organization's where employees behave ethically they may be satisfied with their pay which can reduce incidences of accounting fraud.

Young (2014) suggests that fraud prevention should begin with screening job interviewees by authenticating academic papers, credit bureau reports, criminal records check and review of records with Ethics and Anti-Corruption Authority. During recruitment, organizations should examine employee profile in order to understand their past records to enhance the level of fraud awareness (Eaton & Korach, 2016). Review of staff past records should be made part of organization culture because most organization may applaud fraudulent behavior which might rubber stamp fraud. Ebberts (2015) used the journal of government financial management and pointed out that persons in the top management should ensure that employees embrace strategies that prevent and deter fraudulent acts by providing guidelines on what constitute fraud and consequences for fraudulent act.



Altogether, ACFE (2016) report argued that most organization's does not review interviewee history which might make fraud control difficult. Additionally, ACFE (2016) made an analysis of fraud incidences and found that almost 10% of fraud events could be exposed by fraud signals which might have been overlooked during recruitment process. Therefore, conducting a meticulous appraisal of interviewee's past records could be a major milestone in recognizing fraud (Glodstein, 2015).

The organizational culture in government institutions may contribute to low level of awareness on fraud and methods of forensic accounting. The Australian journal by Van der Wal et al., (2015) on assessment of risk due to fraud and corruption emphasized that employee believe in respect to fraud and its control has great impact on the level of awareness. This is because employee moral believe has a significance influence on decision made in the organization. Specifically, Van der Wal, Graycar and Kelly (2015) pointed out that most government organizations engage employees based on requirements set in law which might not reduce the level of fraud even if there are applied continually in the organization. For instance, public service applies chapter six of the Kenya constitution during recruitment in order to control employee fraud and some employees may meet all the requirements but once engaged may contribute nothing in fraud control. In the two aspects, the level of fraud awareness could be understood in different ways depending on the understanding of employee. Therefore, incorporation of forensic accounting methods would significantly control fraud.

Fraud originates from external environment and afterwards affects internal aspects of the organization. Once fraud is deep rooted in the organization it could influence intentions and motive of employees depending on how they understand fraud (Mills & Copper, 2011). The study by Thevenot and Hall (2011) on lessons learnt from fraud

incidences indicated that the level of social trust has a huge impact in the political and economic advancement of an employee which can closely be linked to economic inequality and fraud. Equally, the study by Rothstein (2011) pointed out that rather than considering fraud as a product of bad leaders and weak institutions it can be regarded as a consequence of unequal distribution of resources and employment opportunities which has downgraded the level of social trust. Thus, organizational impression on fraud control should shift from institutional frameworks on how fraud should be controlled to the establishment of management systems which appreciates fraud menace and how it can be curtailed (Murphy & Free, 2016).

Many government entities have not established strong anti-fraud cultures which can be cascaded down to middle level management who are tasked with day to day operations. Rae et., al., (2017) postulated that the “tone at the middle level” sets in the level of fraud awareness in an organization. In situations where operational managers don’t enhance fraud awareness, it is apparent that lower cadre employees will follow their footsteps. Rae et., al., (2017) affirmed that executive at the operational level acts as the custodians of internal procedures and processes and therefore if the systems of control are weak at this level the whole organization could be affected. Therefore, for county government to achieve its departmental objectives and afterward control fraud menace, empowerment of the middle level managers is indispensable. In government entities all the staff needs to understand the dangers for engaging in fraud because minor fraud incidences may spring forth to be mega fraud incidences. Thus, county government management team needs to encourage operational managers to avoid fraud so that junior employees can follow their footsteps to enhance the level of fraud awareness.

According to Murphy and Free (2016), organization's tone at the top can shape the level of fraud awareness because it can influence behavior aspects expected from management as set in the institution's policy manuals. Johnson, Kuhn, Apostolou and Hassell (2013) made a study on fraud rationalization where they considered it to be a risk indicator essential in fraud control. Equally, Patelli and Pedrini (2015) pointed out that leadership at the executive level influenced behavior of the subordinate staff in accordance to trickle-down theory. The study found that leadership at the top could enhance fraud awareness because it could be used to describe "inevitable realities" that are useful in fraud control which could vary from one person to another (Gunz & Thorne, 2015).

Fraud awareness needs to be engraved in the policy manuals before it can be linked to ethical values. This is because ethical standards are reinforced through acceptable guidelines which are learnt from the top management. To enhance fraud awareness and avoid its related draw backs, it is imperative that governments creates a positive work environment that avoids hostility to reduce threat of fraud (Biegelman & Bartow, 2012). Due to challenges in fraud alleviation, many rules and regulations have been set up to control fraud. For, instance Sarbanes Oxley Act of 2002 has widely been used to enhance fraud awareness in an effort to control fraud (SOX, 2002). Thus, fraud is an enemy that can be defeated because majority of the people are aware of it and how it can be perpetrated.

In effort to come into grip with the nature of fraud and how it can be controlled, many data models as well as legal frameworks and multilateral agreement have been established to control fraud (OECD, 2016). In particular, OECD (2016) came up with a number of recommendations which upheld various attributes that could be incorporated in fraud prevention policy. They agreed that organizations could control

fraud by avoiding activities which focus on challenges hindering fraud alleviation to actions which supports its eradication.

Fraud cannot be prevented by a single person. It is a disease with a number of syndromes and requires incorporation of experts to alleviate it. The report by IMF (2005) on money laundering and financing of terrorism noted that private and public entities needs to come up with right financial and audit procedures which can help them to protect firm's reputation by exposing fraud and recovering proceeds of crime. They agreed that proper procedures could prevent firms from becoming victims of fraud which would lead to material damage. In concurrence to IMF 2005 report, Paolo (2017) acknowledged that firms needs to incorporate policies that enhance fraud awareness.

Fraud can also be regarded as the failure of public institution to observe professional ethics in service to the citizens. The historical culture of public service has been on prevention of fraud and concerted effort has often been directed to public officer's professional integrity but the reality of fraud control is farfetched (IMF, 2005). It is clear that fraud awareness and engagement of experts in fraud alleviation has been the norm in most organizations but fraud control has been rationalized over the years. The ironical bit is that most organizations tasked with the duty to prevent fraud are at the level of fraud policy implementation. In order to command a clear direction on impact of fraud and infuse right attitude towards its alleviation, government institutions need to appreciate that fraud deterrence as well as teaching on fraud exposure are valuable asset in fraud control (Seda & Peterson-Kramer, 2014).

Organizations needs to conduct training sessions on fraud at the period of appointment, and continue with induction sessions after recruitment. Training can be

in form of induction of public service etiquette such non- conformance to conflicts of interest, suspicion reporting, breaching of the policy guidelines and ethics training (PwC, 2016). Training on ethics is a fraud deterrence technique that articulates ethical issues by explaining how fraud can occur in order to keep stakeholders informed in the organization (Godkin & Valentine, 2016). In addition, training on ethical issues assists employees to understand organization laws and regulations. Further, Gyoo Kang, Edum-Fotwe, Price and Thorpe's (2014) argued that trainings can also enhance employees' interpersonal relationships by helping them to develop fraud mindset. Thus, once employees develop right mindset towards fraud, they can know the consequences for engaging in fraud. Sihombing, Rujiman and Muda (2018) recommended that training on forensic accounting methods can assist employees to familiarize with forensic accounting in order to apply it. Finally, if training is done continuously employees can come up with the best methods which can be used to counter fraud, understand how fraud can be perpetrated and eventually identify organization risks which could lead to fraud.

Okonta and Rossouw (2014) affirmed that continuous moral teaching can reduce fraud prevalence in many organizations. According to Hope (2016), anti-fraud training strengthens employee's knowledge on acceptable values, codes of conduct and skills to control fraud. On the other hand, ethics training acquaints employees with dishonest behaviors which could be useful in making ethical decisions in the organization. Thus continuous training empowers employees with skills to recognize risks and intensify capability to deter and detect fraudulent activities (Andrew, 2017). Management team should therefore support continuous training in order to know the extent which they can engage forensic accountants (PwC, 2014a).

Notably many instruments concern with fraud alleviation are merely displayed on institution's handbooks and data bases but the war on graft seems to be very far away. Notwithstanding these underlying setbacks, institutions tasked with fraud control fraud have habitually been frustrated by other arms of government over the years (Alexandra, 2012). Most institutions believe that inscribing words like 'organization XYZ is a corruption free zone' would enhance the level of fraud awareness. However the most effective method to enhance fraud awareness is through top management who should act as role models to other employees, suppliers and other relevant stakeholders. Moreover, organization managers should restrict access to areas prone to fraud such as procurement and finance.

Most fraudulent deals might occur during the tendering process and could involve procurement agencies in government ministries, departments and county governments. These tenders may be awarded to private agencies who at times collude with government employees. Therefore, fraud thrives at the stage where civil servants conspire with private players in order to contravene procurement laws and regulations to perpetrate fraud. This can however be avoided if organizations apply right procurement methods which can be used to alleviate fraud. This was supported by CIPE (2011) which pointed out that employees who act unprofessionally may award contracts in return of kickbacks which would give rise to fraudulent behavior.

Guo et al., (2016) and Jahmani and Dowling (2015) recognized that employees should be treated as per human capital theory in order to control fraud. When employees are treated unfairly they may forget dangers associated with fraud which could erode the level of awareness. Additionally, employees need to be paid commensurate to their qualifications and experience to discourage loopholes for fraud (Rice, Weber & Wu, 2015; Balsam, Jiang & Lu, 2014). Low paid employees may try to siphon some

money to augment the meagre pay particularly when their remuneration is incommensurate to qualification and experience. On the other hand, organizations should avoid discriminatory recruitment process and promotions which could give birth to fraud especially in government entities. Thus, to counter bottlenecks that impede fraud awareness, management needs to avoid any form of discrimination. Every staff needs to be respected regardless of his/her designation and should play some role in fraud prevention and exposure.

According to Australia Anti-corruption agencies (2010), fraud in public service may involve mismanagement of office information, abuse of office and misuse of office resources which clearly illustrates that most people are aware of fraud. Earlier typologies of fraudulent behavior dealt on benefit conferred to public officers and damage incurred due to fraud but it has now changed to grand and petty forms of fraud due to its rationalization in the public service (PIC, 2011). In the analysis of perpetrators character, the study by Alexandra (2012) classify government's employees as political citizens and non-compliers because they direct more effort to fraud prevention initiatives as opposed to fraud exposure.

According to Ngozi (2015), several remarkable intellectuals have explained employee's social orientation to enable them understand how fraud occur and the way it could be reduced. Much of the discussion on the causes of fraud has dwelt much on why fraud occurs instead of it root causes. Similar assertions were echoed by Pic (2011) who agreed that causes of fraud and its prevention measures could vary from one person to another depending on their understanding. An OECD study on fraud and procurement reported a number of motivations behind fraudulent act which appeared distinct from one incidence to another (OECD, 2007). OECD (2007) noted that some people may consider fraud to be a product of low remuneration while others

may interpret it beyond financial reward. A well-paid county government officer may be driven to fraud by personal pressure rather than a cashier who handles huge sum of money.

Bolton (2008) indicates that prevention of fraud could best be controlled before it occurs. Therefore, fraud control should be based on the action taken, grounded on evidence and context in which fraud can occur. Caskey, Nagar and Petacchi (2009) affirmed that management needs to identify areas susceptible to fraud because fraud control is complicated and it's never static. Thus, there is need to educate the public on dangers of fraud and its drawbacks in service delivery. Paolo (2017) recommends that organization's needs to develop programs which enlightens citizens on the dangers of fraud to enhance the level of awareness on methods which can be used to control it.

Government institutions needs to allocate substantial amount of resources to educate employees and community on dangers of fraud through effective public participation. Radios and television set should expose graft and leaders at all cadres should castigate it. In addition, grassroots organizations such as churches and community-based entities should create a culture of transparency and accountability to enhance fraud awareness. They should not defend fraudsters by christening them to be their kinsmen because someone does not steal for the community but for personal gain.

Fraud investigation can also play a significant role in informing management that fraud is imminent. According to McCole (2014), management needs to watch over employee behavior to enhance fraud awareness. Similarly, organizations need to restrict access to accounting records and other physical resources by ensuring there is proper authorization before access (Kumari & Debnath, 2015). In addition,



management should conduct routine follow up to act as a basis for fraud evaluation because fraud awareness should begin historically.

Employee's needs to use fraud hotline to build a culture of fraud reporting which should be done away from the office premises. Fraud hotline can therefore be used to forensically examine fraud incidences. Efiog (2012) argued that lack of awareness on methods of forensic accounting could be a threat to fraud eradication because the discipline has not been recognized in many African nations. Thus, adequate knowledge and experience in forensic accounting could assist organizations to build robust and sophisticated fraud control devices to reduce incidences of fraud. Therefore, there is a need to establish institutional framework which implements and incorporates forensic accounting in the county governments in Kenya. Equally, government organizations have not undertaken the discipline of forensic accounting with much attention in comparison to private organizations which has made them to lag behind for years. Further, institutions which train forensic accountants originate from European countries where the discipline began. In addition, much of the training on forensic accounting is done online because many students may not afford air tickets and accommodations in the nations where the course is offered making the training an 'exam affair' leaving out practical aspect. According to Efiog (2012), forensic accounting training requires incorporation of technology which implies that inadequate technological advancement would identify implementation gaps which could reduce the degree of fraud alleviation and awareness.

The purpose of the objective was to establish whether knowledge of methods on forensic accounting would aid on fraud control. This was done by examining whether county employees understand fraud and the way it could be stopped and alleviated. The level of fraud awareness could be understood differently by various employees

depending on their school of thought and social orientation. The literature review on the level of awareness on methods of forensic accounting was considered satisfactory and the researcher concluded that fraud awareness played an inordinate role in fraud control in county government in Kenya.

The few reviewed studies have adequate findings to define the study gaps for this study in order to establish extent to which the level of fraud awareness on methods of forensic accounting influenced fraud control in county governments in Kenya. The empirical literature reviewed has identified gaps which the study intended to fill. First the study sought to understand extent to which the level of awareness on methods of forensic accounting influenced fraud control, how training and workshops contributed to fraud control, effect of oversight over fraud risk on fraud control, effectiveness of codes of conduct on fraud control and finally established whether few cases of fraud would mean forensic accounting methods were operating well. The study gaps were based on General Strain Theory, Reasoned Action Theory and diamond fraud model which highlighted that the level of fraud awareness could be hindered by employee's pressure, opportunity and strain which could result to fraud incidence out of employees' personal resolution. It is unlikely that people who act ethically could yield to pressure and make a resolution to act fraudulently as a result of strain irrespective of the opportunity to act fraudulently. General Strain Theory, Reasoned Action Theory and diamond fraud model matched well with the awareness on methods of forensic accounting because if people made a resolution to apply right techniques to counter fraud, pressure and strain to acquire wealth illegally could be reduced.

#### **2.2.6 Forensic Accounting Skills and Fraud Control**

Being an expertise in all areas of book-keeping and accounting may not make a person to be an outstanding forensic accountant. A diligent investigative accountant

requires a continuum of abilities and understanding (Bhasin, 2015). The study by Gbegi and Adebisi (2014) agree that in order to stop fraud and expose deceitful accounting practices, forensic accountants are in high demand in private and public entities. This is because the work of traditional accountants is to examine financial activities in order to verify whether they represent a fair view of organizational operations but the work of forensic accountants is to examine financial and non-financial transactions to substantiate whether fraud exists or not. Government departments therefore needs to train forensic accountant so that they can incorporate skills and competences which may be lacking in tradition accounting. Forensic accountants are useful in government entities because they can be used to identify apprehensive financial transactions and deceitful activities.

During investigation of fraud related to computer technology as well as internet there is need to combine auditing skills, computerized audit environment and other alphanumeric skills in forensic investigation. Forensic or investigative accountants are indisputably in demand in all types of organization because they can help organisations to develop policies that can enhance ethical behavior (Arezina et al., 2014). Regrettably, one person may not possess all the skills unless he/she is trained as a forensic accountant.

One of the key factor in forensic accounting is mental competence. A proficient forensic accountant needs a mental capacity which comprise of multiple abilities that cannot be sourced from one discipline. This array of qualities could increase the understanding of traditional accountants who believe on honest and accountability without further judgement. A competent and an effective forensic accountant should unconsciously realize when something is wrong. The study by Oluwatoyin, Ayoib

and Rose (2014) affirm that a forensic accountant can intelligently understand the situation at hand before making decision on the best way to tackle the problem.

Knapp & Knapp (2001) explains that forensic accountant should question any material evidence irrespective of whether it is written or appear in oral form. Wyer and Xu (2010) explained that forensic accountant possesses judgmental and cognitive ability which enable them to tackle fraud intelligently. For instance, forensic accountants can recognize when to make decision in conflicting situations. Equally, Ravisankar, Ravi, Raghava, and Bose (2011) agreed that forensic accountants possess a fraud mindset which assists them to understand the task at hand in order to tackle subsequent cases which might crop up in future.

According to Silverstone and Davia (2005), forensic accounting competence is one of the main element that can assist organizations to reduce incidences of fraud. Traditional accountant may not prevent fraudulent actions fully because they lack fraud control mindsets. Fraud control mindset is the ability to handle monetary and non- monetary records to expose fraud. Ejike (2018) agreed that traditional accountants rely on audit trail to establish whether documents are authentic and reliable but these may not be legally binding to validate documents for judicial process.

As a result of volatile business environment professional skepticism has been lacking in accounting which has led to biasness in preparation of financial statements and reports. Adeniyi and Mieseigha (2013) agreed that an attitude of professional skepticism enable forensic accountants to identify risk of fraud in the organization. Further, professional skepticism can be used to design an effective and a long-lasting model that can be used to mitigate future incidences of fraud.

Tuanakotta (2010) explains that forensic accounting skills aims at establishing whether actions taken in the organization are based on fair representation of facts. The study by Bologna and Lindquist (1993) define forensic accounting skills as the use and application of analytical approach to obtain appropriate accounting information that is useful for judges and juries to apprehend culprits. Appropriate and reliable evidence is an important tool which can be used to alert the management on whether fraud is imminent in the organization. In order to obtain reliable evidence, accounting personnel should be able to examine, recognize, gather and establish whether material evidence is sufficient and appropriate.

Forensic accounting entails application of investigating techniques to expose fraud and corrupt practices by acting as expert witnesses in case of litigation (Dreyer, 2014). Investigative or forensic accountants requires to be incorporated in the organization to deter unethical practices due to lack of independence of internal auditors. As a result of globalization and development in technology there have been dramatic increase in fraud incidences because there is no individual, organization or society which is immune to fraud. Hence, the role of forensic accountants is more likely to provide a wider spectrum of services to an organization (Davis, et al., 2010).

Employees who possess investigative skills play a substantial role in elimination of fraudulent activities in private and public organizations. Engagement of skilled and qualified personnel who understands forensic accounting can help to curb fraud irrespective of organization's operating environment. Therefore, organizations should be encouraged to embrace skills in forensic accounting because they incorporate technology in gathering material evidence. For instance, use of Information Technology can reduce the period taken by accountants to maintain books of account. Similarly, application of information communication technology can help auditors to

increase the level of professional skepticism which is useful in making right judgments, preparation of audit report and developing right audit opinion (Manson, McCartney & Sherer 1997; Modugu & Anyaduba 2013).

Crumbley et al., (2009) recommends that since accounting is considered as the “language of business,” fundamental accounting skills cannot be ignored during its application in the organization. Based on the attributes of a fraudster, forensic accountants require exceptional abilities. Lately, the Federal Bureau of Investigation of United States of America indicated that financial and economic crimes were hard to recognize due to concealing of fraudulent activities (FBI, 2012). As a result, American Institute of Certified Public Accountants (AICPA) recommends that skills and expertise in forensic accounting needs to be incorporated in the preparation of financial statements and reports. AICPA (2004) agree that forensic accountants have diverse knowledge, abilities and beliefs. Therefore, to control fraud, forensic accountants needs exceptional expertise.

An extensive body of research has investigated and drawn profound findings, conclusions and recommendations on skills and traits of successful forensic accounting discipline. The study by DiGabriele (2010a) reviewed various perspectives which practitioners, academicians and users of forensic accounting services can use to identify essential skills in forensic accounting. In particular, Uyar and Gongormus (2011) made a survey of external auditors in Nigeria and come up with necessary skills which are required by forensic accountants in fraud control. For instance, Vasarhelyi, Teeter and Krahel (2010) tried to establish requisite skills which are needed by auditors in the real-time to deter perpetration of fraud. The study established that technical skills were significant requirement in a successful forensic accounting career.

Prominent scholars have listed some of the key skills required in forensic accounting profession which includes managerial accounting skills by Tan, Fowler and Hawkes (2004); knowledge of traditional accounting techniques Tan et al., (2004); legal knowledge, DiGabriele (2010b); computer knowledge, Vasarhelyi et al., (2010) and expertise in accounting, Messmer (2004). Similar studies have enlisted other essential skills which are useful in a forensic accounting career and includes ability to interpret a problem critically (Davis, Farrell & Ogilby, 2010; DiGabriele, 2010a; Tan et al., 2004), critical thinking (DiGabriele, 2010b; Tan et al., 2004), solidarity (Uyar & Gongormus, 2011; Vasarhelyi et al., 2010), moral consciousness (Uyar & Gongormus, 2011; Davis et al., 2010) yearn to acquire new skills (Uyar & Gongormus, 2011; Vasarhelyi et al., 2010) flexibility during investigation (DiGabriele, 2010b) ability to communicate (Uyar & Gongormu, 2011; Messmer, 2004) and ability to consider an array of alternatives that could be available (Vasarhelyi et al., 2010; Coburn, 2006).

Ramaswamy (2005) agreed that forensic accountants have extra-ordinary ability to expose fraud. Some of the extra-ordinary skills includes; knowledge of law and psychology, creative thinking and resilient communication skills. These skills can be used to establish the motive for fraudulent actions. Equally, they can be used to establish whether there are ethical issues which might impede fraud control. Forensic accountant can also use legal skills to gather appropriate evidence which is useful for persons who have less knowledge in accounting. Other essential skills useful in forensic accounting includes: diagnostic ability and writing prowess which is essential in detecting concealed evidence (Crumbley, et al., 2009). As suggested by Crumbley, et al., (2007) forensic accountants need to document their findings in order to produce information that can be used by a panel of judges to prosecute fraud perpetrators. This

was in agreement with Ramaswamy (2005) who argued that forensic accountants can function as proficient witnesses and can provide appropriate evidence by communicating complex facts to a panel of judges. Thus, exceptional communication abilities are vital for a rewarding career in forensic accounting. In addition, prior experience in auditing and law enforcing institution are essential in forensic accounting (Wells, 2003).

Investigative accounting is not objective in nature and therefore calls for resilient abilities during investigation. To complement these ranging skills accounting professionals needs an outstanding personality traits. For instance, Tan et al., (2004) opined that good judgment and exceptional intellectual ability are critical for successful forensic accounting profession. Vasarhelyi et al., (2010) acknowledged that forensic accountants need to open be minded and willing to change in new situations. Similar sentiments were echoed by Messmer (2004) who noted that forensic accounting not only requires an assortment of skills which are distinct from other accounting disciplines, but also requires someone with diverse character and unique personality traits. To counter biased opinions in forensic accounting, these skills are paramount in complex investigations (Coburn, 2006); A desire to inquire on all issues (Davis et al., 2010; Mesmer, 2004); vigorous degree of professional skepticism (Davis et al., 2010; Crumbley, et al., 2009) tax expertise, analytical abilities, creativity and imaginative skills, resilient writing skills and outstanding verbal skills (Samociuk, 2011).

Forensic accountant needs to work with less supervision in comparison to standard auditors because they are more flexible and thrive well under uncertainty of engagement (Ozili,2015 2012). A study by Uyar & Gongormus (2011) emphasized that forensic accountants discern to resolve problematic situations critically. In



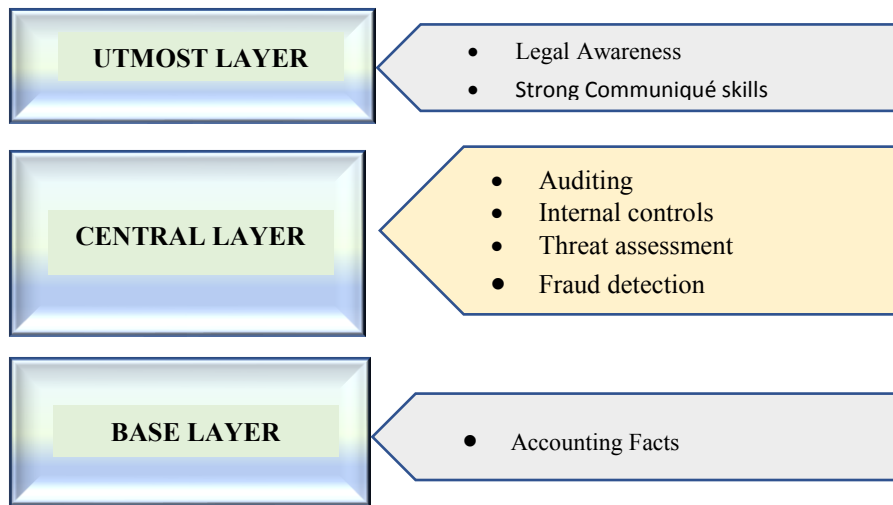
addition, forensic accountants have coordination prowess, moral consciousness and ability to accept new challenges through continuous learning. Results from the study by Bierstaker et al., (2013) found that organizations where forensic accountants are adequately skilled, fraud incidences drop significantly.

Organizations in developing countries have been working vigorously to train accountants on the necessary steps to prevent, detect, deter and investigate illegal behavior (Seda & Kramer, 2008). Academicians and practitioners have also been training on the area of forensic accounting so that they could help accountants and auditors to investigate incidences fraud. Yucel (2011) examined the contribution of forensic accounting in Turkey and concluded that internal audit needs to be supported by forensic accounting services. However, the study noted that the country's education system was inadequate to prepare forensic accountants. Therefore, the study suggested that there was need to enhance forensic accounting training in the country to impact the necessary skills and expertise. Seda and Kramer (2014) recommended that more studies need to be done in different countries to provide useful insights on the efficacy of forensic accounting. Equally, Wang, Lee and Crumbley (2008) found that growth in forensic accounting education was minimal in Hong Kong and Mainland China. The study pointed out that social cultures which encouraged bribe and corruption acted as stimulant for increased use of investigative skills in the society.

This study considered a three-fold forensic accounting model by Chew (2017) to define the three layers of forensic accountant skills. The model is as shown in figure 1. According to Rufus (2015), forensic accounting experts are expected to undertake their responsibilities within three specific areas indicated in the layers.

**Figure 2.4:** *The Three-Fold Forensic Accounting Model.*

*Source Chew, (2017)*



The three-fold forensic accounting model depicts that forensic accountant should have diverse abilities and expertise to counter any form of fraud. The topmost layer indicates that a seasoned forensic accountant should possess legal ability to prove that fraud exists and communicate activities involved in fraudulent transaction. This was supported by Eliezer and Emmanuel (2015); Efosa and Kingsley (2016) who concluded that forensic accounting investigators needs to provide comprehensive information on financial fraud and also act as expert witness. Layer two of the three-fold forensic accounting model indicates that forensic accountants needs to apply knowledge in auditing to analyze possible threats which would be useful in detection of fraud. The third layer in three-fold forensic accounting model indicates that forensic accountants should first learn accounting facts in order to acquire knowledge to perform accounting transactions.

Therefore, the three-fold forensic accounting model considers forensic accounting as an extraordinary model in forensic accounting which use bookkeeping ability to determine the extent of fraud in order to bring culprits in the court of law (Manurung

& Hadian, 2013). For instance, studies by Pedneault et al., (2012) supported the first layer of the three-fold forensic accounting model which argued that fraud investigation should be done by people who have accounting knowledge to avoid shifting of the scope during investigation. In addition, forensic accounts need adequate knowledge in statistics and analytics, strong IT knowledge and human resource management skill which are extensions to three-fold forensic accounting model (Idris, 2017)

According to Okafor and Agbiogwo (2016), proficiency in forensic accounting would assist accountants to discharge accounting duties by predicting trail of transactions. Hopwood *et., al.*, (2012) stated that forensic accounting may not be equated to fraud control but investigation of fraud is part of forensic accounting. This was supported by Idris (2017) who argued that there is no difference between the scope of work for a normal auditor and expert in forensic accounting but the only difference is on how they approach their work. Similarly, the study done by Hamdan (2018) on essential skills needed in the examination of books of account in a chemical industry established that application of sophisticated skills can eliminate all types of finance and economic crimes. The study noted that forensic accounting skills could act as a strategic tool for detecting a number of finance malpractices.

ALMusalamet and Kukreja (2015) targeted professional accountants and auditors in a study in Bahrain, and found that fact-finding agility was a fundamental aspect in fraud investigation. Study done in Nigeria by Aduwo (2016) on accounting fraud and the role of forensic accountant in fraud alleviation established that personal judgments, accounting and legal skills were crucial for the fight against fraud. Similarly, studies that relate forensic accounting skills to fraud control indicate that forensic accountants

work with minimal guidance because of natural desire for knowledge which make them to be productive investigators (Adebisi & Matthew, 2016; Bhasin, 2015).

Bhasin (2015) noted that as institutions grow in magnitude and intricacy, they require to incorporate specialized skills to expose fraud which can be done by experts in forensic accounting. The study emphasized that forensic accounting expertise develop with time and continuous practice can make people to be more competent. Temitope, Nasieku and Muturi (2016) analyzed the role of professional fraud examiners in Nigerian Banks and established that forensic accounting expertise was a major requirement in fraud control. This study was similar to the study by Shaheen, Pranathi, Sultana and Noor (2016) on forensic accounting expertise and fraud control in India. Results from these studies demonstrated that employees who had expertise in forensic accounting could detect irregular patterns related to fraud. This study considered these findings useful and relevant. The study recognized that continuous application of skills in forensic accounting was a key factor in elimination of fraud.

Therefore, this study attempted to explain how forensic accounting skills would help in fraud eradication. The study went through the studies done by other scholars to assess the level of application and acceptance of forensic accounting discipline in different organizations. Additionally, majority of the previous literature were conducted in the developed countries while there was little research done in the developing countries. The researcher believes that acceptance of forensic accounting among academicians as well as employees in the central and county governments would play a significant role in understanding the role of forensic accounting skills in fraud prevention and exposure.

This piece of literature brought exceptional insights on the contribution of forensic accounting skills to fraud control. In order to understand all the skills needed in forensic accounting, a multi-disciplined approach is required because fraud alleviation is never static but keeps changing from time to time. The study gaps were anchored on Mindset and Problem Representation Theory, Anomie Theory, Fraud Diamond Model and Fraud Savvy Model. Mindset and Problem Representation Theory was important in this study because mindset contributes to how people conduct themselves, rationalize issues and resolve problems in any type of organization. Therefore, forensic accounting mindset has a great influence on how employees make decisions. Incorporation of fraud specialist mindsets can provide some insight on how people should control problems related to fraud in the county governments in Kenya. The study also found it useful to include the theory of anomie to act as a solution to anomic pressure as suggested by Durkheim because anomie came as a result of failure to control fraud and justification of fraudulent behavior in government entities which could be prevented by applying skills in forensic accounting. Similarly, Fraud Diamond Model was useful in the study because it explained how pressure to acquire resources created opportunities for fraud due to lack of accountability in government entities which requires incorporation of forensic accounting skills to bridge the gap. Fraud savvy model could also be described as a good method which could be used to introduce forensic accounting skills in all organizations irrespective of whether they are public or private entities. The model comprised of six elements which could be incorporated in the government entities to ensure that financial and non-financial documents are examined forensically. All the four theories and models provided outstanding insight on important skills required in forensic accounting and need to be

integrated in the county governments in Kenya in order to make the dream of fraud control realistic.

### **2.3 Summary of Literature Review**

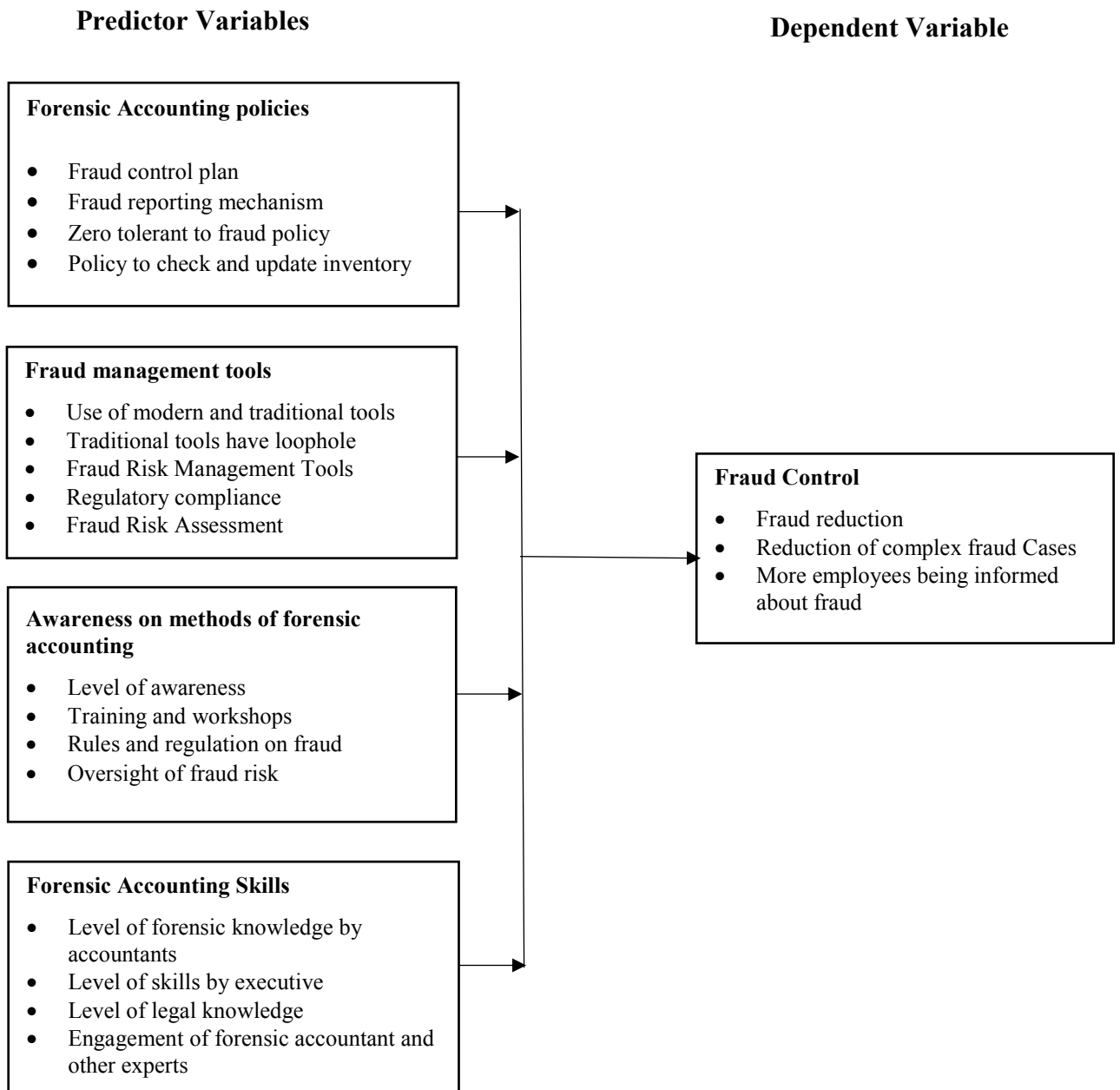
Forensic accounting has become very popular in developing countries due to fraud and financial scandals. In connection to the study's general objective which was to determine the contribution of forensic accounting on fraud control among county governments in Kenya, a few past studies were reviewed. The aim of this review was to develop a comprehensive explanation on the importance of forensic accounting on fraud control. The researcher was convinced that the state and nature of these articles, journals, papers and projects reviewed, research methodologies used, theories that led to the conclusions and focus of the topics were important in identifying the study gaps. The study made a clear distinction between forensic accounting as a profession and its applicability in the industry. The researcher noted that the reviewed studies were from different regions; practitioners, academicians and scholars which depicted that the discipline of forensic accounting was an important field to study. Nevertheless, the researcher did not consider any approach wrong, inaccurate or incorrect because all the findings were considered appropriate in drawing the study gaps. The gaps identified were guided by theories that supported the study as aligned to the respective study objectives.

### **2.4 Conceptual framework**

A conceptual framework is a hypothesized model that identifies the concepts under study and their relationship. The first task was to establish extent to which implementation of forensic accounting policies influenced fraud control in county governments in Kenya. Forensic accounting policies include policies on fraud reporting, policy on fraud control plan, policy on zero tolerant to fraud and corruption

and policy to check and update inventory. The second task was to determine extent to which fraud management tools influenced fraud control in county governments in Kenya. Fraud management tool can be categorized into two main groups; the conventional tools and modern fraud management tools. The study considered other facets of fraud management tools such as adherence to rules and regulations, risk management and risk assessment. The third task was to establish the extent to which awareness on methods of forensic accounting influenced fraud control in county governments in Kenya. The culture of an organization determines the level of fraud awareness and contribution of forensic accounting in fraud control. The researcher examined whether county governments had codes of conducts which governed employee's behavior in reference to fraud and related consequences, influence of seminars and workshops in exposing fraud and extent to which oversight over fraud risk led to fraud control. Lastly, the study examined extent to which application of forensic accounting skills influenced fraud control in county governments in Kenya. The skills were dealt with based on the nature of the study. The study benchmarked on past studies that considered forensic accounting as a profession than application. The expertise involved a multidisciplinary perspective in fraud control. The figure 4 represents the graphical relationship between the four predictor variables, forensic accounting policies, fraud management tools, and awareness on methods of forensic accounting, forensic accounting skills and fraud control, the response variable. The study assumed that there were no mediator or moderating variable that could influence the behavior of the predictors which would lead to change in response of the dependent variable.

**Figure 2.5:** Variables in the study and their relationship





## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

The chapter presents the research blue print used in the study, philosophical orientation, study locale, study population, sample design and sample size, research instruments, research reliability and validity, procedures of data collection and data analysis method.

#### **3.1 Research Philosophy**

Philosophical orientation can be expressed as a doctrine, intuition or character which might be portrayed by a class of people (Mertens, 2010). Research philosophy is useful in the development of research design. This is done by collecting evidence on how data should be gathered and interpreted in order to provide answers to the questions being investigated (Saunders, Lewis & Thornhill, 2009). Traditional theorists came up with these attributes of cognitive thinking so as to build valid opinions which could assist in developing concrete and rational interpretations.

The commonly used philosophical orientations are constructivism and positivism philosophies (Mertens, 2010; Cooper & Schindler, 2011). Constructivism philosophy is commonly used to help the researcher to establish the degree of realism in the study (Bryman, 2012). Positivist research philosophy is based on verifiable information which can be understood without meditation (Levin, 2013; Mwaniki, 2015). Therefore, Positivist philosophy is deductive in nature and can be used to test and assess validity of known theories to establish whether they are applicable in the real world. Any study undertaken by a positivist is carried in a natural manner through collection of views by enquiry method (Adelopo, 2010). Positivist observe a phenomenon by following a methodological approach to achieve certain objective (Creswell, 2013; Cohen & Crabtree, 2015).

The study by Johnson and Duberly (2013) on research philosophies stated that traditional positivist is critical in business and management. Positivist are important in the business world because they make complex decisions by defining relevant 'laws'. Theorization of these laws might lead to loss of insights which would reduce the entire law to generalizations. Therefore, this philosophy nears interpretivist. Epistemological interpretivist supports that it is necessary for the researcher to understand differences between human beings as social actors which is significant in the current study. In the same way, people interpret social roles according how they understand them. On the other hand, people interpret roles played by others according to their general understanding.

Interpretivist comes from two words; phenomenology and symbolic interactionism. Phenomenology refers to the manner in which human being make sense of the world around them while symbolic interactionism refers to the way people understand the world around them. Therefore, people interpret actions of the persons they interact with and this interpretation leads to different meanings and actions. Remenyi, Williams, Money and Swartz (2013) advocate that interpretivist philosophy is appropriate in business and management research because business decisions are complex and unique. However, interpretivist argues that generalizability is not important since business environment is ever changing, and organizations are unique, the idea of generalization has become less valuable.

Innovative approaches have developed that combine and assimilate quantitative and qualitative research methods. Quantitative and qualitative research approaches have continually opened up unique methods for answering research questions (Glogowska, 2011). Studies that involve measuring, counting and comparison rely on quantitative research approach. On the other hand, qualitative approaches are suitable when

explanations for certain phenomena are needed. Tashakkori and Teddlie (2010) stated that the nature of the research determines the approach used in the study which could either be; quantitative research, qualitative research and mixed method research approach (MMR).

In context of this study, both quantitative research and qualitative research were important thus the study approach was mixed method research. Research can further be categorized in terms of nature and therefore could either be ontological research, axiological research or epistemological research (Hashemi & Babaii, 2013). This study sought to determine the contribution of forensic accounting on fraud control among county governments, meaning that in terms of nature it sought for reality on state of the matter in regard to how forensic accounting contributed to fraud prevention and exposure in the county governments, which meant that the study was epistemological. Christ (2013) explained that in epistemological research MMR approach is both objective and subjective in nature. Therefore, this study was positivist in nature, interpretivist epistemologically and embraced mixed method research. Positivism philosophy was useful in the current study because the researcher needed to understand the influence of forensic accounting on fraud control in order to come up with valid conclusions using a methodological approach in County Governments in Kenya. Equally, the researcher needed to test known theories on fraud control to establish whether there were applicable in the county governments. Similarly, the study had some element of interpretivism because different employees understand fraud in diverse perspectives. Employees in various cadres interpret actions and efforts used to fight fraud in different ways making fraud control to be multifaceted and complicated affair which could be tackled by forensic accounting.

### **3.2 Research Design**

Research design is a logical arrangement which stipulates how data should be gathered, cleaned and processed in order to develop meaningful inferences (Zikmund, Babin, Carr & Griffin, 2010). The aim of the study was to comprehensively explain the influence of forensic accounting and its end effect on fraud control in county governments in Kenya. Based on the fact that the study was interpretivist epistemological, MMR approach was suitable, as the elements of bias from qualitative and quantitative approaches could be contained by incorporating particular procedures that limits the level of bias (Mertens, 2013). Christ (2013) stated that findings in MMR, can be transferred to a comparable but a varied population. This is because details used in qualitative data can relate to the sample size used in quantitative sample to limit the level of biasness. Therefore, the study generalized its findings from the sample size drawn from the population.

MMR was important because it provided an opportunity to answer complex questions through exploring of information from quantitative and qualitative views to improve outcomes. In addition, MMR provided a systematic review of the findings by analyzing quantitative and qualitative research evidence. Therefore, MMR was useful in the current study because data analyses were carried out ethically by assuming that there was an objective reality that could be described accurately and impartially (Schiffman & Kanuk, 2012; May, 2013; Garuth, 2013; Mwaniki, 2015; Opyio, 2017). This study sought to determine the contribution of forensic accounting on fraud control among county governments and the target respondents were a section of the employees. Glogowska (2011) advised that MMR was an effective method which could be used while conducting research on a group where few respondents felt marginalized. MMR approach gave marginalized group some room to express their

views during data collection. This was reflected in the study because some of the county officers involved thought they had no role in preventing and detecting fraud in the County Governments in Kenya. Equally, use of MMR design enabled the researcher to collect quantitative and qualitative data simultaneously. Thus, the design is referred to as concurrent design. According to Creswell and Hanson (2014), concurrent designs are transformative and convergent; meaning that both quantitative and qualitative data can be converged to provide an inclusive scrutiny of the problem and results can be integrated to establish the final interpretation.

From this perspective, the study was explanatory in nature and descriptive research design was considered appropriate. The design was useful in the study because it acted as a link to the empirical review and a guide in data analyses. Finally, it explained the behavioral change of fraud control from the changing behavior of the independent variables involved in the study.

### **3.3 Target population**

Schutt (2015) defined population as totality of the items useful in defining the research problem. The study defined departmental accountants, director audit, revenue officers, auditors, chief officers and county secretaries as the study respondents. This formed a multiple sampling frame population. A total of 415 staff from 10 county governments in Mount Kenya region formed the target population. The distribution of staff is as shown in table 3.1.

**Table 3.1 Target Population**

County	Departmental accountants	Director audit	Revenue officers	Chief officers	County secretaries	Total
Kirinyaga	15	1	16	8	1	50
Laikipia	11	1	14	10	1	48
Embu	11	1	18	9	1	51
Meru	12	1	18	10	1	50
Nyeri	10	1	19	8	1	51
Tharaka Nithi	12	1	18	9	1	52
Muranga	14	1	17	8	1	49
Nyandarua	13	1	19	9	1	48
Nakuru	18	1	19	10	1	53
Kiambu	12	1	18	10	1	57
Total	128	10	176	91	10	415

**3.4 Sampling Procedure and Sample Size**

The study did the multiple frame sampling process to produce a better coverage of the target population and reduce biases due to coverage errors (Lohr & Rao, 2006). Proportionate stratified sampling technique was applied after using the sampling formula by Cochran (1977);

$$n_o = \frac{z^2 pq}{e^2} \dots\dots\dots(1)$$

Where  $e$  is the desired margin error,  $p$  is the proportion of the population and  $q = 1 - p$ , and  $Z$  is obtained from normal tables depending on the confidence level chosen. The study chose 95% confidence level leading to  $Z$  value of 1.96 and a margin error of 5%. The proportion of the population was taken to be 50% since it was not specified. The computed  $n_o = 385$  was the representative sample for proportions. Since the formula apply when population are large,  $N > 30$ , then actual samples for the frames with  $N > 30$  were computed and those which were less than thirty all the

subjects were considered to be the respondents for the study. Since the counties had different number of subjects in the large sampling frames, stratified proportionate sampling was used to determine the corrected sample for proportions for each frame in the 10 counties. The corrected sample size  $n$  was computed using the formula

$$n = \frac{n_o}{1 + \left(\frac{n_o - 1}{N}\right)} \dots \dots \dots (2)$$

Where  $N$  is the total number of subject in each sampling frame in the ten counties.

To determine the actual number of respondents from each county per the sampling frame,  $n_f$  was computed using the formula

$$n_f = \frac{x}{k} \times n \dots \dots \dots (3)$$

Where  $n_f$  is the actual number of respondents,  $x$  is the total number of subject in the frame and  $k$  is the total number of the subjects within the ten counties in the frame and  $n$  is the corrected sample for proportions. The distribution of respondents and actual sample size of 331 for the study were as presented in table 3.2.

**Table 3.2:** *Respondents distribution within the counties and sample size*

County	Departmental accountants	Director audit	Revenue officers	Chief officers	County secretaries	Total
Kirinyaga	12	1	11	7	1	50
Laikipia	9	1	10	9	1	48
Embu	9	1	13	8	1	51
Meru	10	1	13	9	1	50
Nyeri	8	1	14	7	1	51
Tharaka Nithi	10	1	13	8	1	52
Muranga	11	1	12	7	1	49
Nyandarua	10	1	14	8	1	48
Nakuru	14	1	14	9	1	53
Kiambu	10	1	13	9	1	57
Total	103	10	127	81	10	331

### 3.5 Research Instruments

According to Cooper and Schindler (2011), research instruments are objects which researcher uses to gather data which is relevant to the study. Research instruments were collected through concurrent design. Concurrent design involved collection of data using open-ended and close-ended questions through survey method (Creswell & Hanson, 2014). A structured closed ended questionnaire was used to capture quantitative data. An interview schedule for county secretaries was used to capture qualitative data and open-ended questions were used to complement the quantitative questions. The questionnaire for the county staff was divided to separate demographic information from information related to study variables. The first fragment marked A was constructed to capture demographic data from the county staff; gender, age, work experiences and level of academic qualification which assisted the researcher to understand respondents better. Section B was used to capture data related to the research objectives. Each objective was structured into questions items whose responses were constructed on a 5 scale Likert that tested degree of agreement on each item. The scale was strongly agree, disagree, undecided, agree and strongly



agree. Toulaitos and Compton (2013); Creswell and Hanson (2014) stated that in a study where research variables are based on respondent's sentiments and insights, questionnaire and interview schedules were the most suitable data collection tools. In addition, Mugenda and Mugenda (2012) supported that questionnaires, observational forms, interview schedules and standardized tests were the most reliable data collection tools used in a social science research. By use of questionnaire and interview schedule, response bias and mixed method bias error were minimized by triangulation of the responses captured.

### **3.6 Piloting**

According to Teijlingen and Vanora (2014), piloting helped the researcher to identify any item in the research instrument which was unclear or ambiguous to the respondents. The instruments were piloted from two counties; Kisumu and Samburu which were selected at random and not included in the actual study. Pilot tests were done to enhance instruments validity and reliability. Cooper and Schilder (2011) argued that a pilot sample size of at least 10% of the study sample is essential to yield accurate and standard pilot results.

#### **3.6.1 Validity of the Instruments**

The objective of the study was to measure the attitude and behavior of county employees in respect to forensic accounting and its contribution to fraud control. Instrument validity refers to the ability of an instrument to accurately reflect the concept being measured, yield scores that reflect the precise variables being measured and contain important qualities being measured by the dependent variable. Garuth (2013) stated that the main purpose of validity test is to describe a particular construct or concept which is contained in an observable variable. Equally, it defines the extent to which a test measures theoretical concept or trait. Similarly, Taherdoost, (2016)

defines instrument validity as the unit in which results obtained in a statistical data represents the variables under study in actual realism. To enhance validity of the instruments test-retest method was used. Content validity was further done to measure extent to which instruments represent particular realm of indicators. Instruments were given to two groups of specialists who had tacit information on forensic accounting and fraud alleviation. The result for both instruments gave CVI's that were greater than 0.6 hence the instruments were considered valid as advised by (Jeffry, 2011).

### **3.6.2 Reliability of the Instruments**

Reliability is defined by Kottener, Audige and Brorson (2014) as the ability of an instrument to establish differences between respondents when measured under the same condition twice. Reliability of the instruments was done to establish whether instruments were predisposed to unsystematic error. Instruments were designed in such a way that they were in two sections. Subject scores from one section were correlated with scores from second section. Two tests done on the instruments gave reliability indexes that were greater than 0.6 hence the two instruments were considered reliable for the study as advised by (Korb, 2016).

### **3.7 Data Collection Method**

Observing the research protocols, the researcher first got the permits from Kenya Methodist University, NACOSTI and authorities from counties administrations to carry out the study. The research extensively inducted the research assistants on the importance of the study. In addition, the researcher advised them on how they would interact with respondents during the data collection process. The data instruments were administered by the research assistants while the researcher conducted face to face interview with the county secretaries available in the office. Respondents'

opinion to participate was highly respected. County staff were requested to fill the questionnaire and research assistants collected them after a fortnight.

### **3.8 Data Analysis**

Data analysis encompasses transformation of collected raw data into facts which are suitable for decision making by expunging incorrect materials, correction of mistakes and eliminating omitted data (Kothari, 2011). MMR requires that quantitative and qualitative data needs to be separated to enhance integrity of the research. This enables the researcher to collect answers for complex questions in order to get evidence from quantitative and qualitative perspectives. Data analysis was based on explanatory design and quantitative data analysis carried more weight than qualitative data analysis which supported the findings. Quantitative data analysis was descriptive and inferential in nature, whereas qualitative data analysis was descriptive in nature.

Descriptive statistics were used to establish the differences between the means of all dependent variables, while multiple analyses of variance was done to disclose statistical differences between the variables. Multiple regression analysis was used and analysis took two stages; descriptive analysis and inferential analysis. To enhance accuracy and precision statistical package SPSS version 23 was used. Descriptive analysis entailed examination of demographic data with the findings based on the study objectives. Results from descriptive analysis were presented in form of frequencies and percentages in a tabular form. From the nature of the study, the mean and standard deviation were the key measures of the central tendency considered for further analysis. To establish the influence of predictor variables on fraud control several tests were done; normality test, multicollinearity test, model fitness, model specification and test of hypothesis were done at 95% confidence level.

The study's regression model was  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$  whereby; Y= fraud control in county government,  $\beta_0$  = intercept constant,  $\beta_1$ - $\beta_4$  = Regression coefficients,  $X_1$  = application of forensic accounting policies,  $X_2$  = fraud management tools,  $X_3$  = level of awareness on methods of forensic accounting,  $X_4$  = forensic accounting skills and  $\epsilon$  is the error term. Qualitative data was merged with quantitative data (numeric information). Merging involved equal emphasis of the two components in the research in order to compare, contrast or synthesize the data produced (Suleman & Hopper, 2014). The merging method enabled the researcher to report qualitative and quantitative results together in a discussion section, where the quantitative statistical results were reported first, followed by quotes that either support or refute the quantitative results.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.0 Introduction**

The chapter presented findings from the study, analysis and discussions. Findings were presented as per the objectives. The study provided discussions of the main findings from the research and where applicable linked the literature reviewed to the research outcomes.

#### **4.1 Response Rate**

The study targeted 331 county staff who were given the questionnaires. Out of 331 questionnaires administered, 277 were considered valid which represented 83.69% return rate. Only 5 county secretaries out of ten got involved in the study, translating to 50% return rate. Both response rates were considered adequate as per the recommendations by Kothari (2011) who suggested that 30-40% response were adequate.

#### **4.2 Demographic data Analysis**

It was important to capture the demographic information; gender, age, educational background and years worked in devolved government for all the respondents involved in the study. This was crucial to the study because it helped the researcher to understand cross-cutting issues on fraud control across gender, age, education and number of years worked. The findings were presented in the successive sections.

##### **4.2.1 Distribution of the Respondents by Gender**

This part presented gender characteristics of county government staff. Results indicated that 65.7% of the respondents were male while 34.3% of the respondents were female. Equally, all the county secretaries involved in the study were males. The responses were as indicated in table 4.1.

**Table 4.1: Respondents Gender**

Category	Frequency	Percent
Male	182	65.7
Female	95	34.3
<b>Total</b>	<b>277</b>	<b>100.0</b>

From each gender category, it was evident that males were more than females. This implied that, there was no gender balance among the respondents. It generally gave an impression that professionals tasked with fraud control are dominated by a particular gender. Maybe, the inequality may influence application of forensic accounting in the County Governments which would hinder control of fraud.

#### **4.2.2 County Staff Respondents` Age**

Study respondents were requested to specify their age bracket. The sole aim was to analyze the age dynamics of county government employees. The responses were as portrayed in table 4.2

**Table 4.2: County Staff Respondents Age**

Category	Frequency	Percent
Less than 30 Years	58	20.9
30 - 45 Years	141	50.9
45 Years and Above	78	28.2
<b>Total</b>	<b>277</b>	<b>100.0</b>

The results revealed that most respondents represented by 50.9% were aged between 30 -45 years, while 28.2% of the respondents were in the age bracket of 45 years and

above. Only 20.9% of the respondents were aged 30 years and below. This pointed out that the respondents had a spectrum of ideas and their opinions were sufficient for analysis.

#### **4.2.3 County Staff Respondents Academic Background**

The respondents were requested to state their highest level of education. This was important in order to establish whether county workers had adequate skills which would enable them to understand fraud dynamics. The feedback were as depicted in table 4.3.

**Table 4.3:** *County Staff Respondents' Academic Background*

Category	Frequency	Percent
Bachelor's degree	201	72.6
Master's degree	71	25.6
Doctorate degree	5	1.8
<b>Total</b>	<b>277</b>	<b>100.0</b>

The findings indicated that majority of the respondents at 72.6% had bachelor degrees while 25.6% of the respondents had master's degree and 1.8% had doctorate degree. The implication of this is that all the respondents were highly educated and experienced which enhanced reliability of the questionnaires.

#### **4.2.4 Respondents' professional qualification**

Data on county staff professionalism was captured. The findings were as shown in table 4.4.

**Table 4.4:** *County Staff Respondents' professional qualification*

Items	Frequency	Percent
Professional	143	51.6
Non-Professional	134	48.4
<b>Total</b>	<b>277</b>	<b>100.0</b>

The findings indicated that majority of the respondents at 51.6% had professional qualification while 48.4% of the respondents had no professional qualification. Results therefore implied that majority of the respondents had done professional courses in various disciplines and most probably they had acquired knowledge on fraud alleviation on course of their training.

#### **4.2.5 Working Experience**

The study investigated respondents' work experience in the county government. This was to determine whether the respondents had rich information on operations of the county governments. Equally, there was need to understand whether the staff had necessary knowledge which was considered useful for the study. Their responses were presented in table 4.5



**Table 4.5:** *Participants Experience as Senior Officers*

Responses	Frequency	Percent
Less than 5 years	50	18.1
5-10 years	180	65.0
Over and above 10 years	47	16.9
Aggregate	277	100.0

Results indicated that 65.0% of the respondents had an experience as senior officers for the period of 5-10 years while 16.9% had been in senior positions for more than 10 years. Only 18.1% of the respondents had been in senior position for less than 5 years. This depicted that the respondents had remarkable experience in managing institutions. This implied that they were aware of fraud menace in the public organizations.

#### **4.2.6 Respondents working Experience in Devolved Government**

Respondents were requested to state the period of time they had worked for devolved government in Kenya. These was done by investigating the number of years that respondents had worked. This was important so as to establish whether employees had adequate skills and experience in finance and procurement where fraud is prevalent in County Governments in Kenya. Their respondents were displayed in table 4.6.

**Table 4.6:** *Respondents Experience in Devolved Government*

Item	Frequency	Percent
Less than Five Years	165	59.6
More than 5 Years	112	40.4
Total	277	100.0

Findings established that most of the respondents at 59.6% had worked in the devolved government for less than 5 years while 40.4% of the respondents had worked in the devolved government for more than 5 years. This indicated that most respondents had worked in county government for a few years and needed more time to get acquainted with measures which can be used to counter fraud.

### **4.3 Quantitative Data Analysis**

In this study quantitative data analysis presents descriptive statistics. These statistics provided meaningful descriptions of the study findings based on the questions from each objective. To clearly understand the responses, a 5-scale Likert was used to code the responses where SD-strongly disagree was equivalent to 5, D-disagree was 4, U-uncertain was 3, A-agree was 2 and SA- strongly agree was equal to 1. The order of presentation is aligning with the study objectives.

#### **4.3.1 Forensic Accounting Policies and Fraud Control**

The first objective of the study was to establish the extent to which implementation of forensic accounting policies influenced fraud control in county governments in Kenya. Findings for this objectives were presented in five questions as presented in Table 4.7.

**Table 4.7: Availability of forensic Accounting Policies in County Government**

Item		5	4	3	2	1	Mean	Standard deviation
There are forensic Accounting Policies in the County Government	<i>f</i>	40	125	12	93	7	3.4	1.116
	%	14.4	45.1	4.3	33.6	2.5		
There is fraud control plan to Curb Fraud	<i>f</i>	40	144	7	62	24	3.4	1.226
	%	14.4	52	2.5	22.4	8.7		
Our county has a policy on zero tolerance to fraud communicated to employees	<i>f</i>	9	80	9	131	48	2.5	1.172
	%	3.2	28.9	3.2	47.3	17.3		
There is an effective fraud reporting mechanism in County Government.	<i>f</i>	19	142	15	80	21	3.2	1.158
	%	6.9	51.3	5.4	28.9	7.6		
County Government have a Policy to check and update inventory to reduce cases of fraud	<i>f</i>	10	64	13	178	12	2.6	1.007
	%	3.6	23.1	4.7	64.3	4.3		
<b>Overall means and standard deviations</b>							<b>3</b>	<b>1.311</b>

The research objective needed to evaluate whether forensic accounting policies were incorporated as part of county government mainstream policies. This was important because inclusion of policies on forensic accounting could be the foundation for fraud control. Findings in the table 9 indicate that 59.5% of the respondent disagreed that policies on forensic accounting were incorporated in the county government management policies. Only 36.1% of the respondents agreed that policies on forensic accounting were factored in the county government management policies while 4.3%

of the respondents were undecided. From this finding, it was clear that majority of county governments had not taken the discipline of forensic accounting seriously due to lack of clear policies to govern it. These finding were in agreement with assertions by (Kingsley, 2012) who argued that employees' working environment would assist organizations to implement policies which would curtail deceit. In particular, the study argued that employees could use informal meetings to discuss fraud related issues which could send a signal to fraudulent colleagues that 'someone is watching their steps'. This is because many organizations have forgotten corporate responsive behavior which would enforce fraud control policies. In addition, the findings echoed affirmations by ACFE (2016) in Austin Texas which advised organizations on importance of reviewing cash policies so that they could eliminate incidences of fraud by sanctioning fraudulent and corrupt leaders who interfere with whistle blowers.

Similar assertions were echoed by one chief officer who based his argument on the work of (Domanski, 2016) who argued that organizations need to establish fraud policy to assess the degree of threat. Equally, the study by Leung, Coram, Cooper, and Richardson (2015) agreed that organizations needs to develop a sophisticated fraud policy which can adequately review business operations by analyzing institution's threat matrix.

Fraud control plan outlines actions which need to be taken at a particular time and the person who should responsible. The study revealed that 66.4% of the respondent disagreed that counties had an established fraud control plan which would help to curb fraudulent activities. Only 31.1% of the respondents agreed that Counties had an established fraud control plan which would help curb fraudulent activities while 2.5% of the respondents were undecided. Despite continuous increase in fraud cases involving county officials, it was evident that county governments have not developed

fraud control plan which would help in reducing fraud incidences. This finding supports contentions by Church and Mcmillan (2001) which maintained that fraud control plan embeds other policies and procedures adopted in the organization by indoctrinating tolerable values that deter perpetration of scam though its applicability has been low in government institutions across the globe. Similarly, Ngwenya and Munyanyi (2015) concurred with findings from study by arguing that although fraud control plan assists in detecting errors and inaccuracies in financial reports, many organizations do not adhere to the guidelines of fraud control plan once it has been established. Further, the finding supports assertions by Mutnuru (2016) who established that even though fraud control plan assists organizations to review internal control procedures by overseeing accounting processes it has not been adopted in government institutions across the globe. Therefore, the sole purpose of fraud control plan is to reduce the risk of fraud by incorporating policies that reduce incidences of fraud by adhering to institution's procedures as laid down in the organization's risk manual.

Thirdly it was important to understand whether county governments had proper fraud deterrence procedures. Equally, the study sought to establish whether this policy was properly communicated to all the employees. The findings revealed that 64.7% of the respondent agreed that county government had a policy on zero tolerance to fraud and it was communicated to all employees. Only 32.1% of the respondents disagreed that county governments had a zero tolerance to fraud policy which was brought onto attention of all the staff while 3.2% of the respondents were undecided. It was therefore evident that county government had fraud alleviation procedures which was communicated to all the staff members. These assertions agreed with Nyokabi (2018) who stressed that a written manual on the consequences of fraudulent behavior would

assist employees to understand organization's fraud policy at one hand and at the same time help the naughty staff to understand the consequences for engaging in fraudulent. Moreover, the findings supported assertions by Rae et al., (2017) which illustrated that policies and regulations on fraud control builds organization's system of control in order to decrease the risk of fraud when they are followed diligently.

The finding on efficacy of fraud reporting mechanism in the county government's revealed that 58.1% of the respondents disagreed that there was an effective fraud reporting mechanism which was put in place while 36.5% of the respondents agreed that there was an effective fraud reporting mechanism put in place while 5.4% were undecided. This means that county governments do not have an effective fraud reporting mechanism. The finding agreed with report by CAQ (2010) a Platform for fraud Action in Washington, D.C which pointed out that organizations do not employ strategies to mitigate occurrence of fraud by putting proactive fraud management program such as incorporation of whistleblowers program to assist in detecting fraud incidences. Equally, the findings support declarations by Patelli and Pedrini (2015) who pointed that many organizations ignored importance of "trickle-down" theory which argued that members in the management team should act as role models so that fraud reporting is efficiently monitored. Specifically, he argued that top management should behave like an 'open album' or an 'open book' so that their actions could be emulated by the staff at the lower level which has not been the norm in the public sector.

The findings on whether checking and updating of inventory was done at the county government established that 68.6% of the respondents agreed that counties had a policy to check and update inventory to reduce cases of fraud while 26.7% of the respondents disagreed that counties had a policy to check and update inventory to

reduce cases of fraud while 4.7% were undecided. This meant that the county governments have a policy to check and update inventory to reduce cases of fraud. This finding supported the study by Klynveld (2013) which established that employees are masterminds of fraud represented by about 50% particularly those not in the management. However, Klynveld (2013) argued the loss of inventory was the least form of fraud at 13% which clearly depicts that inventory control can immensely reduce fraud control to 0%. The assertions support proclamations by (Lachney, 2018) who pointed out that supervisor's needs to monitor activities of immediate and subordinate staff to prevent loss of inventories because in case they assumed 'things are going on normally' it may result to fraudulent actions. Further, the findings agreed with Kennedy (2018) who suggested that key source documents should be kept in a lockable cabinet to restrict access by unauthorized personnel who interfere with inventories. Equally, Lachney (2018) affirmed that management should ensure that they keep documents as per the guidelines laid on finance and procurement policies to control theft of stock.

#### **4.3.2 Fraud Management Tools**

The second study objective was, to determine the extent to which fraud management tools influenced fraud control in county governments in Kenya. The results from the objective questions are presented in the table 4.8.

**Table 4.8** *Fraud Management Tools*

Item		5	4	3	2	1	Mean	Standard deviation
County government used both traditional and modern fraud management tools	<i>f</i>	33	125	10	93	16	3.24	1.201
	%	11.9	45.1	3.6	33.6	5.8		
Traditional tools have loopholes	<i>f</i>	24	73	13	146	21	2.76	1.178
	%	52.7	7.6	4.7	8.7	26.3		
Modern technology leads to reduction in fraud	<i>f</i>	15	35	27	141	59	2.30	1.104
	%	5.4	12.7	9.7	50.9	21.3		
Improvement on regulatory compliance reduced fraud	<i>f</i>	19	59	30	100	69	2.49	1.262
	%	6.9	21.3	10.8	36.1	24.9		
Proper fraud risk management tools can control fraud	<i>f</i>	12	30	12	153	70	2.14	1.051
	%	4.3	10.9	4.3	55.2	25.3		
Fraud risk assessment mitigates internal and external fraud	<i>f</i>	16	76	11	143	31	2.65	1.163
	%	5.8	27.4	4	51.6	11.2		
<b>Overall means and standard deviations</b>							<b>2.6</b>	<b>1.345</b>

The findings on whether county governments used both traditional and modern fraud management tools and approaches to control fraud, results in table 10 indicated that 57% of the respondents disagreed that county government applied traditional and modern fraud management tools and approaches to control fraud while 39.4% of the respondents agreed that county government used traditional and modern fraud management tools and approaches to control fraud while 3.6% of the respondents was



undecided. This indicated that majority of the county governments do not incorporate modern and traditional methods to combat fraud. The finding agreed with Gray and Debreceny (2014) in California State University Northridge, United State school of Accountancy who argued that most organizations do not use modern fraud management tools such as data mining which needs to be combined with traditional methods to assist in fraud control. Similar sentiments were echoed by Gao and Srivastava (2011) in Indian Accounting Review who claimed that modern fraud management tools need to be incorporated to other approaches to ensure that there is a multi-disciplinary approach to fraud control.

The second question sought to understand whether traditional tools and approaches had loopholes in detecting and controlling fraudulent activities in the county governments. The results revealed that 60.3% of the respondents supported that traditional tools as well as approaches had loopholes in detecting and preventing fraudulent activities in the county governments while 35% of the respondents disagreed that traditional tools as well as approaches had loopholes in exposing and eliminating fraud in the county governments while 4.7% of the respondents were undecided. This implied that traditional tools and approaches had loopholes in detecting and controlling fraudulent activities in the county governments. This finding agreed with Ravisankar et al., (2011) who argued that there was no much application of modern techniques in governments department because there was less inclusion of sophisticated tools such as data mining due to over-reliance on ineffective traditional methods to detect fraud. The results similarly support Laxman et al., (2014) who argued that top management needs to embrace modern technology because it could assist organizations to monitor deceptive behavior instead of applying traditional fraud management tools which have loopholes. This finding were further explained by

Adetiloye, Olokoyo and Taiwo (2016) who suggested that most organizations used traditional methods of fraud control such separation of duties and monitoring of employees' daily activities but they could be efficient when followed diligently.

As a measure to counter loopholes in detecting and controlling fraudulent activities inherent in traditional fraud management tools, the study sought to establish whether application of modern tools and techniques could assist in fraud control. The responses shown in table 4.8 indicate that 72.2% of the respondents agreed that use of modern tools and techniques reduced incidences of fraud while 18.1% of the respondents disagreed that use of modern tools and techniques reduced incidences of fraud while 9.7% of the respondents were undecided. This indicates that application of modern technology would reduce fraud in the county governments in Kenya. This finding agreed with the study by IBM (2013) an American Multinational Information Technology Company in Armonk, USA, which noted that as a result of growth of data and complexity of financial transactions amidst fraudsters' unending skillfulness, incorporation of forensic accounting techniques such as use of computer system to gather accounting evidence, would assist in exposing fraud incidence. Similar findings were echoed by Beach and Schiefelbein (2014) who suggested that adoption of modern-day fraud management tools would assist in monitoring unstructured data which could avoid loopholes for fraud in many organizations. Moreover, the findings agreed with Gray and Debreceeny (2014) who suggested that fraudulent action could be solved through data mining which is an effective modern method when combined with other methods.

Equally, it was important to establish whether compliance with regulatory framework could reduce fraud in the county governments in Kenya. The results indicated that majority of the respondents at 61% agreed that compliance with regulations on

forensic accounting could eliminate fraud incidences in the devolved units while 28.2% of the respondents disagreed that compliance with regulations on forensic accounting could eradicate fraud incidences in the devolved units while 10.8% were undecided. This revealed that compliance with regulations on forensic accounting can expose and eradicate any deceitful activities in the government entities. Research findings support the work done by Apostolou and Crumbley (2008) who pointed out that regulators and interested parties need to solidify the role of auditors on fraud control by supporting regulations set by boards such as (PCAOB) to address material misstatement related to fraud. This was further supported by PWC (2014a) who affirmed that organization's internal fraud control methods could expose fraud by at least 36% but still there was need to ensure that employees adhere to organizational rules and regulations.

The fifth question sought to establish whether incorporation of risk management tools would assist in fraud control. Results in Table 10 indicate that 80.5% of the respondents agreed that engagement of risk management tools and procedures could control fraud while 15.2% of the respondents disagreed that incorporation of risk management tool and procedures could control fraud while 4.3% of the respondents were undecided. In reference to the current study, fraud control is achievable if counties would carry proper risk management by using right tools. The findings concur with study done by Okoye and Gbegi (2013) on selected ministries in Kogi state Nigeria which pointed out that governments initiative to establish internal audit could be considered as a milestone on fraud control and mitigation of risk but its effectiveness majorly depend on the tools used because majority of the applications have been computerized.

The last question investigated the contribution of risk assessment on mitigation of internal and external fraud. 62.8% of the respondents agreed that continuous appraisal of the incoming danger as a result of threat of fraud when done proactively could bar perpetration of deceitful behaviors' within and outside organization premises while 33.2% of the respondents disagreed that continuous appraisal of the incoming danger as a result of threat of fraud when done proactively could bar perpetration of deceitful behaviors' within and outside organization premises while 4.0% of the respondents were undecided. This revealed that in case fraud risk assessments were done preemptively it would substantially reduce susceptibilities of deceitful activities within and outside organization premises.

The findings were in harmony with ACFE (2016) a global fraud survey which argued that organization's risk assessment was an important check-up test for discovering organization's level of risk. This was further reinforced by McNally (2015) who reinforced that effective risk assessments improves organization's risk management framework as well as internal control system by evaluating probable risk areas in order to develop appropriate ways to respond to risk of fraud. In addition, Holtzlatt, Needles, and Tschakert (2016) opined that proper risk assessment enables organization to identify possible red flags which could be fraud cautionary symbols exhibited in a hazardous environ if right procedures are put in place.

#### **4.3.3 Awareness on methods of Forensic Accounting and Fraud Control**

The third study objective aimed at establishing the extent to which the level of awareness on methods of forensic accounting influenced fraud control in county governments in Kenya. This was crucial because awareness of methods on forensic accounting would assist employees to recognize risk which could intensify

organization's capability to prevent and detect fraudulent activity. The results from the research questions were presented in table 4.9

**Table 4.9:** *Awareness of methods of Forensic Accounting on Fraud Control*

Item		5	4	3	2	1	Mean	Standard deviation
Workers are aware of methods of forensic accounting on fraud control	<i>f</i>	150	50	31	37	9	4.06	1.217
	%	54.2	18.1	11.2	13.4	3.1		
Code of conduct that governs employees behavior	<i>f</i>	12	24	14	190	37	2.22	0.936
	%	4.3	8.7	5.1	68.5	13.4		
There are frequent seminars and workshops on methods of forensic accounting	<i>f</i>	62	93	11	91	20	3.31	1.326
	%	22.4	33.6	4	32.8	7.2		
There is an established process for oversight of fraud risks	<i>f</i>	23	120	43	47	44	3.11	1.25
	%	8.3	43.3	15.5	17	15.9		
Few cases of Fraud indicates forensic accounting methods are functioning	<i>f</i>	43	166	12	14	42	3.56	1.255
	%	15.5	59.9	4.3	5.1	15.2		
<b>Overall means and standard deviations</b>							<b>3.25</b>	<b>1.197</b>

The study assessed whether employees in the county governments were aware of the available forensic accounting methods which would aid in fraud control. If employees were aware of methods of forensic accounting, they would enact proper regulations which would curtail escalation of fraud in the county governments in Kenya. Findings revealed that 16.5% of the respondent's support that county government employees were aware of methods of forensic accounting which are used in the elimination of fraud while 72.3% of the respondents were not well versed with forensic accounting methods used in fraud control while 11.2% of the respondents were undecided. This

shows that county employees were not conversant with methods of forensic accounting which could be used in fraud control. This finding concurred with assertions by Efiog (2012) who acknowledged that the discipline of forensic accounting was relatively new in many African countries with slight applicability on fraud control. The finding further confirmed declarations by Andrew (2017) of Queensland University who pointed out that fraud awareness would help employees to recognize risky areas in order to strengthen internal control system. Comparable views were echoed by (Mihret, 2014) who argued that some cultural aspects increased the risk of fraud because some employees modernized fraud in the government institutions where fraud has been internally rationalized and justified which has eroded the level of awareness on the right methods which can fight the menace.

Results yielded by investigation on whether codes of conduct governed behavior of employees indicated that 81.9% of the respondents agreed that County Government employees adhered to the laid down rules that governed ethical behaviors with 5.1% undecided on whether County Government employees had established rules and regulations that governed employees' ethical behavior while 13% were not aware of the existence of codes of conduct. The finding was consistent with assertions by ACFE (2009), a global fraud survey which suggests that governments should ensure there establish proper codes of conduct which enforce values that castigates and shuns unethical behavior. The assertions were further supported by Rae et al., (2017) at Griffith University, Southport, Australia who argued that policies and regulations on employees' code of conduct must be stringently adhered to because they build the entities internal control base which could help in reducing the level of risk in the organization. Similarly, the findings were supported by Ebberts (2015) who pointed

that organizations should maintain good code of conduct because it is an invaluable asset in fraud control and a key pillar in the establishment of organizational culture.

The research question on whether county government executives conducted seminars and workshops on methods of forensic accounting in order to increase the level of fraud awareness found that 56% of the respondents disagreed that there were frequent seminars and workshops on methods of forensic accounting while 40 % of the respondents agreed that there were seminars and workshops on methods of forensic accounting in the county governments while 4% were undecided. The findings were in agreement with Seda and Peterson-Kramer (2014) who recommended that for an organization to command a clear direction on fraud and its impact in the society, they need to appreciate that fraud deterrence and exposure training was indispensable, though its applicability has not been optimized across the globe. This was further echoed by PwC (2014b) which proposed that employee training inducts public service etiquette that would aid in fraud control if it could be made a norm in the government entities. Equally, findings support assertions by Paolo (2017) who maintained that there was need to establish programs that train employees on dangers of fraud which could help the public to identify and act on fraud incidence when encountered.

The results on whether there was an established process for oversight of fraud risk within the county governments indicated that 51.6% of the respondent disagreed that there was a process of oversight over fraud related risks that could minimize fraud and 32.9% of the respondents agreed that there was a process of oversight of fraud risk which could reduce fraud in the county governments while 15.5% of the respondents were undecided. Therefore, the study depicted that there was no clear process of oversight over fraud risk in the county governments in Kenya. This finding echoed IMF (2005) who recommended that firms should ensure that proper procedures exist

which can be used in overseeing fraud risk to reduce cases of fraud. Notably, Paolo (2017) supported IMF (2005) by suggesting that firms need to incorporate procedures that enhance fraud awareness by ensuring there is oversight of fraud to avert institutional failures and erosion of professional ethics on the service to the public. On the other hand, McCole (2014) agreed that monitoring and oversight over fraud risk were important aspects in performance management because they assist in the evaluation of organization's internal controls system.

The research question on whether few cases of fraud would mean forensic accounting methods were could deter perpetration of fraud, 75.4% of the respondents disagreed that if there were less cases of fraud it would mean that forensic accounting methods could deter perpetration of fraud while only 20.3% of the respondents agreed that with few incidences of fraud it could be perceived that forensic accounting methods were functioning effectively while 4.3% of the respondents were undecided. This assertion echoed proclamations by Van der Wal et al., (2015) who pointed out that organizations are managed by employees who come from diverse backgrounds and therefore the level of fraud awareness may vary from one employee to another and reduction or increment of fraud incidences may not automatically mean employees are aware of methods of forensic accounting. Similar opinions were reverberated by Murphy and Free (2016) who suggested that organization's impression on fraud control should shift from institutional frameworks on how fraud should be controlled to the establishment of management systems which appreciates organizations are prone to fraud menace and sophisticated tools needs to be incorporated because fraud land scape is non-static.



#### 4.3.4 Forensic Accounting Skills and Fraud Control

The fourth study objective was to examine the extent to which application of forensic accounting skills in counties influenced fraud control in county governments in Kenya. Adoptions of skills in forensic accounting can reduce fraud incidences in the devolved government where forensic accountants are engaged on need be basis. Findings from the objectives question items were as indicated in Table 4.10.

**Table 4.10:** *Forensic Accounting Skills and Fraud Control*

Item		5	4	3	2	1	Mean	Standard deviation
Fraud has reduced due to expertise in forensic accounting	<i>f</i>	26	165	9	60	17	3.44	1.114
	<i>%</i>	9.4	59.6	3.2	21.7	6.1		
Fraud cases dropped after engagement of forensic accountants	<i>f</i>	27	59	10	160	21	2.68	1.177
	<i>%</i>	9.7	21.3	3.6	57.8	7.6		
County government outsource fraud experts to detect fraudulent activities	<i>f</i>	18	33	8	155	63	2.23	1.126
	<i>%</i>	6.5	11.9	2.9	56	22.7		
County governments accountants are skilled to detect fraud	<i>f</i>	15	141	6	108	7	3.18	1.091
	<i>%</i>	5.4	50.9	2.2	39	2.5		
Top executives are knowledgeable on how to detect fraudulent activities	<i>f</i>	19	160	12	63	23	3.32	1.146
	<i>%</i>	6.9	57.8	4.3	22.7	8.3		
<b>Overall means and standard deviations</b>							<b>2.475</b>	<b>0.9423</b>

The study sought to evaluate whether incorporation of experts in forensic accounting reduced fraud in the county government. 27.8% of the respondent agreed that engagement of experts in forensic accounting would help in reducing fraud incidences

in the county government while 69% of the respondents disagreed that engagement of experts in forensic accounting could help in curbing fraud in the county government while 3.2% of the respondents were undecided. This infers that most county governments do not engage experts in forensic accounting in their quest to control fraud. Therefore, experts in forensic accounting need to be engaged in the county governments to indoctrinate skills which can alleviate fraud incidences. Study findings were similar to the work done by Ogoro (2014) who argued that engagement of experts bring forth necessary skills in fraud control such as problem-solving ability, critical thinking, teamwork, ethical awareness, strong communication skills and investigative capability. Similar sentiments were echoed by Eliezer and Emmanuel (2015) who affirmed that forensic accountants are fraud specialists and therefore they can work with minimal guidance compared to normal accountants who require special skills. Equally, Bilbeisi and Brown (2015) admitted that forensic accountants can examine monetary transactions by scrutinizing entries from their source document to the reporting stage so that they can find material facts which can warrant arraignment in court and later prosecution.

Further investigation involved checking whether fraud cases dropped after engagement of forensic accountants. The results were, 65.4% of the respondents agreed that engagement of forensic accountants would reduce fraud in the county governments while 31% of the respondents argued that forensic accounting could not alleviate fraud menace while 3.6% of the respondents were undecided. This finding agreed with study done by Ernst and Young (2003) who supported that engagement of experts in forensic accountant would decrease the threat of scheme but the skills of forensic accounting have not been applied widely in elimination of fraud in the public sector where a fraction of public servants understand it. Similarly, the findings were

supported by Bhasin (2015) who suggested that a competent forensic accountant would be a treasured talent in government organization's because they can help in reducing instances of fraud. Equally, Bhasin (2016) agreed that as institutions continually grow in magnitude and complexity, fraud disclosure requires inclusion of forensic accounting proficiency which has become a core skill in elimination of fraud.

The study went ahead to find out whether county government outsource fraud experts to detect fraudulent activities. Results in Table 4.10 indicate that 78.7% of the respondents supported that county governments outsourced experts to detect fraud while 18.4% of the respondents disagreed that county governments outsourced fraud experts while 2.9% of the respondents were undecided. Although county governments had not employed full time forensic accountants there was a need to outsource forensic accountants because their skills were useful in fraud alleviation. This finding were in concurrence to the study done by Temitope, Nasieku and Muturi (2016) who established that engagement of fraud expertise was an essential requirement in detection and prevention of fraud. Similarly, Shaheen, et al., (2014) suggested that investigative agility ought to be embraced and made compulsory in government entities and large-scale companies in order to control white collar crimes. Likewise, Aduwo (2016) supported that accounting and legal skills were important in fraud control and key attributes of a forensic accountant needed to be outsourced.

The results yielded by the research question on whether county governments accountants were skilled to detect fraud indicated that 56.3% of the respondents disagreed that accountants in the county government were skilled to prevent and detect fraudulent activities while 41.5% of the respondents agreed that accountants in the county government were skilled to prevent and detect fraudulent activities while 2.2% of the respondents were undecided. This revealed that county government

accountants had no requisite skills and expertise to prevent and detect fraudulent activities. This finding were in agreement with Eiya and Otalor (2013) who argued that although forensic accounting assisted in investigation as well as professional recovery of assets, it still remained underutilized in government sector across the globe because most accountants have not been trained on forensic accounting. Similar sentiments were echoed by Eliezer and Emmanuel (2015) who affirmed that skills on fraud examination were essential and needed to be incorporated in fraud eradication because traditional accountants possess less skills to eliminate fraud.

The last research question under this objective sought to find out whether top executives had knowledge to detect fraudulent activities, 64.7 % of the respondents disagreed that top executive's members had knowledge to detect fraudulent activities while 31% of the respondents agreed that top executive's members had requisite knowledge to detect fraudulent activities while 4.4 % of the respondents were undecided. This implied that top executive's members did not have adequate knowledge to detect fraudulent activities except a few who had some finance background. This finding agree with ALMusalamet and Kukreja (2015) who pointed that top management needs skills in forensic accounting to enable them investigate fraud because auditors might collude with other employees to perpetrate fraudulent act in case management do not understand fraud dynamics. Similarly, the findings were supported by (Hamdan, 2018) who established that skills in forensic accounting were useful in preventing misuse of public resources compared to other conventional accounting methods because it is a strategic and dynamic tool employed by top executive to manage all types of fraud.

### 4.3.5 Fraud Control

The study's general objective was to investigate the contribution of forensic accounting on fraud control in county governments in Kenya. This was important and integration of fraud management policies and modern technology were investigated. The findings were presented in table 4.11.

**Table 4.11:** *Findings on Fraud Control*

Item		5	4	3	2	1	Mean	Standard deviation
Fraud management policies leads to reduction in cases of fraud	<i>f</i>	57	63	14	119	24	3.04	1.354
	<i>%</i>	20.6	22.7	5.1	43	8.6		
Increased use of modern technology reduced fraud	<i>f</i>	20	152	10	85	10	3.31	1.093
	<i>%</i>	7.2	54.9	3.6	30.7	3.6		
<b>Overall means and standard deviations</b>							<b>3.175</b>	<b>1.224</b>

Results on whether fraud management policies reduced incidences of fraud revealed that 51.6% of the respondents agreed that incorporation of fraud management policies reduced fraud incidences in the county government while 43.3% of the respondents disagreed that fraud management policies minimized fraud incidences in the county government while 5.1% were undecided. This means that fraud management policies led to reduction of cases of fraud in county government in Kenya. This finding was in agreement with Ngwenya and Munyanyi (2015) who suggested that fraud management policies boosts efficiency of accounting and non-accounting procedures because they act as catalyst for reducing fraud by ensuring that employees comply with organizational rules and procedures. Similarly, Rae et al., (2017) declared that

fraud management policies builds entities internal control system by enhancing departmental communication both horizontally, vertically and laterally to reduce risk of fraud. Additionally, Andrade, Hamza and Duarte (2017) affirmed that fraud management policies enhance culture of transparency and accountability which are the key pillars in fraud prevention.

A proportion of 62.1% of the respondents involved in the study disagreed that use of modern technology to monitor and record transactions led to reduction of fraud cases in the county government while 34.3% of the respondents supported that use of recent technology to monitor and record transactions led to reduction of fraud cases in the county government while 3.6% was undecided. This was an indicator that the modern tools used in the counties were not strong enough to fight fraud or the knowledge to use them was weak. The finding contrasted the study by Beach and Schiefelbein (2014) who argued that governments needed to employ modern tools to monitor unstructured data which could create loopholes for fraud because many organizations feared to jeopardize employees' privacy through unstructured data. The study further contradicts assertions by Klein (2015); Laxman et al., (2014) who argued that employees needs to restrict access over accounting and procurement functions which are prone to fraud by utilizing technology to monitor fraudulent activities.

#### **4.4 Qualitative Data Analysis**

The county secretary interview schedule yielded the qualitative data. The responses were presented in phrase form. From the responses, all the counties engaged experts who were familiar with recruiting process while placing employees in all cadres. Seventy five percent of the responses claimed that hiring process was not politically instigated in their county. However, 25% of the respondents agreed that some positions in the county were filled political particularly the seats of county executive

committee members. Some respondents argued that during recruitment, age was an important factor because of the general belief that older people were more experienced. In terms of engagement of fraud management policies, 100% of the respondents agreed that fraud management policies were useful for examining financial and non-financial transactions. Most respondents agreed that national government played an essential role in formulating fraud management policies which were cascaded down to the counties. It was therefore evident that counties needed to come up with more ways to fight the fraud menace. All the respondents agreed that modern technology was embraced in the county government to curb fraud. For instance, one county secretary quoted that;

*“Some of our control system, both internal and external are automated. The system enables employees to retrieve financial or non-financial data by tracing patterns of transactions over a period of time”.*

County Secretaries argued that county government had no experts who could continuously interact with the system to trace occurrence of fraud. It was noted that most county government relied on IFMIS which was on the rolling stage. Training on the use of IFMIS was done by national government hence most county staff had not familiarized with it absolutely. Therefore, it was evident that most county government could not be able to use it to eliminate fraud. The respondents in general had an opinion that national government needed to come up with more strategies which would enhance fraud control in the county governments. County Secretaries agreed that county governments need to sensitize its stakeholders on dangers of fraud in order to control fraud menace. Most of the county secretaries supported that use of signboards, posters, banners and memos to castigate fraud. Equally, they argued that

memos could be used to sensitize employees on the dangers and consequences of fraud. In addition, county secretaries agreed that holding of seminars and workshop would train employees on the ways to curb fraud and consequences of fraud. It was noted by 80% of the county secretaries that top executives attended training on fraud control to enable them interpret output from fraudulent act to establish an end-result. The study also found that the counties had made efforts to ensure that fraudulent employees were brought to book. In addition, respondents emphasized that judiciary should help counties in fighting fraud by convicting the culprits.

#### 4.5 Inferential Analyses

Multiple regression analysis was the most suitable tool for inferential analysis. Some features were considered and tests done at 5% level of significance. To test the data's probability distribution, Shapiro Wilk Test was used. The main aim of Shapiro-Wilk test was to certify whether a set of arbitrary data sets contained attributes of Gaussian distribution. The results were presented in table 4.12.

**Table 4.12:** *Shapiro-Wilk Test*

Items	Statistic	df	Sig.
Policies on forensic accounting	0.661	276	0.307
Fraud management tools	0.563	276	0.477
Level of awareness on methods of forensic accounting	0.503	276	0.112
Application of forensic accounting skills	0.517	276	0.039
Fraud Control	0.439	276	0.638

The statistics 0.661, 0.563, 0.503, 0.517 respectively in order of the study specific objectives explained the proportion of variance as a measure of multicollinearity. All the statistics were greater than 0.5 indicating that studied predictors were not



adversely affected by multicollinearity. The statistic for fraud control {0.439} was less than 0.5 which led to conclusion that fraud control depends on change of some other predictors not include in the study. From this finding, the study concluded that the variables investigated were normally distributed. To ascertain whether the combination of the variables investigated were fit, model fitness test was done using F test.

**Table 4.13: Model Fitness**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	155.176	4	38.794	16.52	0.0000 <sup>b</sup>
Residual	638.565	272	2.348		
Total	793.741	276			

From the ANOVA test done the significance value {0.000b; see table 4.13} computed was negligible at the 95% level of significance. Supportively the computed F statistic (16.52) was greater than F critical value (4, 272, 0.05); which is 2.6. The study then concluded that the combination of the predictor variable was stable for drawing valid conclusions regarding fraud control in the county governments.

**Table 4.14: Model Summary**

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
0.753	0.567	0.561	0.0012

The coefficient of determination, R<sup>2</sup> was computed {0.567; see table 16} described the predictive accuracy of the model and explanatory power of independent variable. Forensic accounting could explain 56.7% variation on fraud control within the

counties This therefore implied that 56.7% variation in fraud control could be explained by a unit change in forensic accounting while the remaining percentage could be explained by other parameters which did not form part of the study problem. The remaining 43.3% were explained by other factors related to fraud control within the county government. The adjusted  $R^2$  {0.561; see table 4.14} was slightly less than  $R^2$  (0.567; see table 4.14} by 0.006 which indicated that fraud control was sensitive to addition of other unrelated variables. This inferred that the overall model was highly sensitive to irrelevant variables that could be introduced into the model. Therefore, the study concluded that the set of variables considered in the study, formed the best combination in respect to fraud control and had an outstanding contribution to fraud control. The findings aligned with the Temitope, Nasieku & Muturi (2016) who analyzed the role of fraud examiner's professionalism on fraud alleviation and established that forensic skills expertise was a major requirement in fraud control. Thus, the results were consistent to prior studies because forensic accounting does not diminish the risk of fraud but can also assists executive team to develop strategies which can mitigate widespread of risks McCole (2014).

It was further important to investigate the strength and direction of the relationship between predictor variables and fraud control and findings were presented in table 4.15.

**Table 4.15:** *Strength of the Association between study predictors and Fraud Control*

**Pearson Correlation coefficients ( $r$ ) and corresponding significances ( $\alpha$ ) at 95% Confidence level. 2-tailed test for the investigated independent variables against fraud control in the counties.**

<b>Predictor Variable</b>	<b>Pearson Correlation Coefficient (<math>r</math>)</b>	<b>corresponding significance (<math>\alpha</math>)</b>
Forensic Accounting policies	0.553	0.000 (negligible)
Fraud management tools	0.519	0.000(negligible)
Level of awareness	0.547	0.000(negligible)
Forensic accounting skills	0.591	0.000(negligible)

Strength of the linear relationship between variables was established through the Pearson correlation coefficient test performed at 5% significance and two tailed. The correlation coefficient ( $r$ ) informed the study the magnitude and direction of the relationship between the predictor and the criterion variable, whereby the bigger the coefficient, the stronger the association (Marlin, 2015). Findings in table 4.15 indicated that all the predictor variables had a moderate relationship on fraud control. Forensic accounting skills had the highest correlation coefficient ( $r = 0.591$ ) with Fraud management tools ranking last with ( $r = 0.519$ ). A correlation coefficient can be weak, moderate, or strong (Kothari, 2014). The Pearson Correlation coefficient of forensic accounting policies and fraud control was computed and established as {0.553, p-value < 0.001 see Table 4.15} which depicts that incorporation of forensic accounting policies contribute moderately in fraud control. This therefore revealed that there was a significant relationship between the two study paradigms. Findings echoed assertions by (Bailey 2016) who argued that policies on forensic accounting had significant influence on fraud control because they assist organizations to collect

physical and electronic evidence which can be used to expose fraud. Similarly, assertions support the study by Lee (2016) who pointed out that forensic accounting policies can be used to counter the problem of conflict of interest which has been a cancerous cell in government institutions.

Finding in Table 4.15 indicate that Pearson correlation coefficient for fraud management tools and fraud control was computed and established as ( $r=0.519$ ,  $p\text{-value} < 0.001$ ) which had a constructive relationship to fraud control. This finding conformed to previous studies and affirmed that government entities needs to enhance its control activities by designing sophisticated anti-fraud management tools which can move concurrently with technological advancement (Verovska, 2014). Similarly, the findings agree with assertions by Frazier (2016) who suggested that in order to eradicate fraud, organizations need to undertake proper risk assessment which is a prerequisite in fraud control.

The computed Pearson correlation coefficient for the level of awareness on methods of forensic accounting and fraud control was ( $r=0.547$ ,  $p\text{-value} < 0.001$ ) had a positive and significant association to fraud control was presented in Table 4.15. The findings support assertions by Domino, Wingreen and Blanton (2015) who pointed out that incorporation of methods on forensic accounting assists management team to streamline the system of governance so as to reduce incidences of accounting fraud. Equally, the findings agree with (Paolo, 2017) who stated that firms needs to train employees on proper methods which can be used to prevent fraud in order to enhance the level of awareness.

Forensic accounting skills had a positive and significant association to fraud control as indicated by computed Pearson correlation coefficient presented in table 4.15 ( $r =$

0.591 at p-value < 0.001). The finding confirmed result of the previous studies and agreed that organization's needs to train employees so that they can acquire skills in forensic accounting in order to prevent fraud (Claire & Jude 2016; Temitope, 2016). Similarly, Okafor and Andrew (2016) argued that incorporation of skills in forensic accounting assists the management to restructure its internal control system which could play a great role in reducing fraud.

According to Thornhill (2012), estimators due to independent variables exhibit a student-t distribution in a linear regression model. The study null hypotheses were tested at 5% level of significance and at 272 degrees of freedom. This analysis enabled the researcher to make a conclusive decision on whether to reject or accept the study's null hypotheses. The results were presented in table 4.16

**Table 4.16:** *Summary of the Regression Coefficients*

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	1.369	0.027			
Forensic Accounting Policies	0.219	0.070	0.238	3.129	0.002
Fraud Management Tools	0.247	0.077	0.271	3.208	0.002
Level Awareness	0.211	0.062	0.205	3.403	0.001
Forensic Accounting Skills	0.267	0.077	0.285	3.468	0.001

From the findings all the null hypotheses were rejected based on the fact that the associated significance values {0.002, 0.002, 0.001 and 0.001 respectively in order of

the study null hypotheses; see table 4.16} were all less than the 0.05, the  $\alpha$ -value. The corresponding computed t values {3.129, 3.208, 3.403 and 3.468; see table 4.16} were greater than the t-critical value at (0.05, 277) =1.96. From these findings the study concluded that existence of policies on forensic accounting, fraud management tools, awareness of methods on forensic accounting and application of forensic accounting skills had significant influence on fraud control in county governments in Kenya. The result gave outstanding insight on the extent which independent variables determined the rate of change in dependent variable, fraud control.

The results in table 4.16 show that the relationship between forensic accounting policies and fraud control had a coefficient ( $\beta_1$ ) of 0.219 (p-value=0.002). The t-computed (3.129) was greater than the t-critical (1.96) hence the association was significant. This revealed that a unit increase in forensic accounting policies would lead to a 0.219 increase in fraud control in the county government in Kenya. In addition, the association between fraud management tools and fraud control had a regression coefficient of 0.247 (p-value=0.002). The t-computed (3.208) was greater than the t-critical (1.96) hence there was significant relationship. This revealed that a unit increase in fraud management tools would lead to 0.247 increase in fraud control. Further, the results in table 18 show that the relationship between the level of awareness on methods of forensic accounting and fraud control had a coefficient of 0.211 (p-value=0.001). The t-computed (3.403) was greater than the t-critical (1.96) hence the association was significant. This revealed that a unit increase in level of awareness on methods of forensic accounting would lead to 0.211 increase in fraud control.

The findings also indicate that the relationship between forensic accounting skills and fraud control had a coefficient of 0.267 (p-value=0.001). The t-computed (3.468) was

greater than the t-critical (1.96) hence the relationship was significant. This was a clear indication that a unit increase in forensic accounting skills would lead to a 0.267 increase in fraud control. The relationship was statistically significant because the p-value (0.001) was less than the significance level (0.05). It is evident that the strongest predictor that influenced fraud control was forensic accounting skills with a coefficient of (0.267), followed by fraud management tools with a coefficient of (0.247), then forensic accounting policies with a coefficient of (0.219) and the least was level of awareness with a coefficient of (0.211).

In conclusion, Table 4.16 indicate that fraud control could be influenced by 1.39 units. These suggested that fraud control would be improved by 1.39 units if other factors which did not influence fraud alleviation and did not form part of study problem could be improved. The study concluded that these variables chosen by the researcher were among the best measures of fraud control in the county government in Kenya. The study's summarized statistical model was represented as;  $Y = 1.39 + 0.219X_1 + 0.247X_2 + 0.211X_3 + 0.267X_4$  whereby; Y= fraud control in county government, 1.39 = intercept constant, 0.219, 0.247, 0.211 and 0.267 are best estimators for the predictors; application of forensic accounting policies, fraud management tools, level of awareness on methods of forensic accounting and forensic accounting skills.

#### **4.6 Summary of the Discussions**

The study found that 68% of the respondents involved in the study were not sure whether application of forensic accounting policies would curb fraud in the counties as evidenced by an overall mean of 3.0 at 1.311 standard deviations {see table 4.6}. Further finding on the same revealed that application of forensic accounting policies had moderate association on fraud control as shown by 0.553\*\* {see table 4.15} and

when properly engaged in an organization it would help curb fraud by a unit of 0.219 {see table 4.16}. This decision was after rejection of the null hypothesis that; implementation of forensic accounting policies has no statistically significant influence on fraud control in county governments in Kenya, guided by the p value (sign) = 0.002 {see table 4.16}. The finding aligns with studies reviewed. For instance, the study by Bailey (2016), agreed that policies on forensic accounting have a significant and positive influence on fraud control because they help in discovering physical and electronic evidence in a fraudulent act. Similarly, the assertions support Lee (2016) who acknowledged that forensic accounting policies can be used as weapons to counter the problem of conflict of interest which has been a cancerous cell in government institutions. The findings also concur with report by (ACFE, 2016) which pointed out that policy on fraud prevention was important for discovering organization's level of risk. Similarly, the finding agreed with Morales et al., (2014) who argued that forensic accounting policies were important instruments in fraud prevention because they assist employees and individuals to report incidences of fraud to enhance culprits' restitution. From the findings, it was clear that fraud control could be influenced by forensic accounting policies. The study therefore concluded that policies on forensic accounting had a remarkable influence on fraud control.

Incorporation of fraud management tools had significant influence on fraud control as shown by 0.519\*\* {see table 4.15} and when properly engaged in an organization it would curb fraud by a unit of 0.247 {see table 4.16}. Therefore, association between fraud management tools and fraud control confirmed result of the previous studies and concluded that government entities need to enhance their control activities by implementing and designing anti-fraud methods which can eradicate fraud by developing right tools that can advance concurrently with technological development



(Verovska, 2014). Similarly, the findings agreed with (Frazier, 2016) who pointed out that organizations need to appraise probable fraud areas by assessing the underlain risk as a prerequisite in fraud control to reduce prevalence of scam. Equally, the study results confirmed that there was positive linear association between fraud management tools and fraud control in the devolved units in Kenya. The result therefore relates with previous studies. For instance, Steve et al., (2011) established that incorporation of technology could help organizations scrutinize financial information in order to identify fraud indicators such as anomalous figures and irregular conformations of data.

Level of fraud awareness on methods of forensic accounting had a correlation coefficient of 0.547\*\* {see table 4.15}. In situations where employees are aware of forensic accounting methods, fraud could be eliminated by a unit of 0.211 {see table 4.16}. The assertions support the study done by Domino, Wingreen and Blanton (2015) who revealed that organization's system of governance influence employee behavior which in turn would affect the level of fraud awareness. Equally, to enhance the level of fraud awareness forensic examination of employee data would help employers to understand staff criminal records which can improve the level of fraud awareness (Eaton & Korach, 2016). These findings marry observations by Paolo (2017) and Andrew (2017) who concluded that incorporation of methods in forensic accounting can enhance the level of fraud awareness which have a positive relationship on fraud control. The findings therefore implied that fraud awareness bestows employees with skills to recognize risks in order to prevent and detect fraud in the county governments in Kenya. However, the results contradict findings by IMF (2005) which expressed that awareness of methods on forensic accounting had no significant influence on fraud control because many organizations tasked with

alleviation of fraud had not developed right methods due to inefficiency of government agencies. Notably IMF (2005) agreed that instruments tasked with fraud control appeared on organization's handbooks but the war on graft seem to be very far from any form of eradication.

Lastly, incorporation of forensic accounting skills had a significant influence on fraud control as shown by 0.519\*\* {see table 4.15}. The finding depicts that incorporation of forensic accounting skills would control fraud by a unit of 0.267 {see table 4.16}. The study resolved that there was a positive relationship between forensic accounting skills and fraud control in the County Governments in Kenya. Study results supports assertions by Nonye and Okoli (2015) who established that incorporation of forensic accounting skills helps organizations to curtail misappropriation of resources for selfish interest. Likewise, Okafor and Agbiogwo (2016) established that forensic accounting skills was an important asset for managing banking fraud and therefore can be incorporated in other sectors of economy. The study therefore concluded that employees in county government need to push towards engagement of forensic accounting in order to alleviate fraud.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

The chapter presents the results to the research problem, significant inferences, conclusions as well as essential study recommendations. The research examined contribution of forensic accounting on fraud control within County Governments in Kenya. Various study propositions based on the research parameters were verified statistically in order to get concise results. The conclusions and recommendations relating to specific objectives as well as suggestions for further research were also highlighted.

#### 5.1 Summary of the Findings

The researcher gathered adequate data which was logically organized in order to answer pertinent questions as guided by specific study objectives. Various hypothetical underpinnings were carefully reviewed based on the findings of remarkable intellectuals in order to draw reliable inferences and establish the research gap. A comprehensive hypothesized model for the relationship between forensic accounting and fraud alleviation was formulated. The assumed association was tested by the specific objectives. Grounded on conceptual framework and specific study parameters, an opinion based query was established which tested for validity using content validity index through a pilot study. The independent variables were tested for multicollinearity. Shapiro-Wilk test was used for the purpose of Normality tests. Several statistical tools were also applied so that the researcher could get correct study outcomes.

### **5.1.1 Contribution of policies on Forensic Accounting on Fraud Control in County Governments**

First and foremost, the unprejudiced goal for the research objective was to find valid answers on the contribution of forensic accounting policies on fraud control among County Governments in Kenya. The results clearly pointed out that policies on forensic accounting had a positive influence on fraud control. The assertions were explained by the results from statistical interpretations. Therefore, hypothesis H<sub>01</sub>: Application of forensic accounting policies had no contribution to fraud control was rejected and it was concluded that policies on forensic accounting played a substantial role on alleviation of fraud in the Kenyan devolved forms of government.

Findings therefore confirmed that forensic accounting policies played a crucial role in fraud control. Notably, the relationship between the two constructs was not as strong as expected although it was positive. However, this could be due to the fact that county governments were established recently in Kenya. It was also evident that many policies on forensic accounting were at formative stages which had made County Governments to duplicate policies formulated by the National government.

### **5.1.2 Influence of Fraud Management tools on Fraud Control in County Governments in Kenya**

The second research objective established whether fraud management tools could control fraud within County Governments in Kenya. Specifically, many county governments were trying all they could to incorporate traditional and modern fraud management tools. The results from descriptive analyses indicated that traditional tools had more loopholes hence there was need to incorporate modern fraud management tools in fraud control. It had been hypothesized that fraud management tools has no contribution on fraud control. However, results confirmed that there was a positive statistical association between fraud management tools and fraud control.

Nevertheless, it was disgusting to discover that modern fraud management tools which were more effective in fraud control had not got great attention within County governments in Kenya. Inadequate application of superior and effective fraud management tools could be associated with inadequacy of resources besides lack of proficient and knowledgeable personnel.

### **5.1.3 Influence of awareness on methods of forensic accounting on Fraud Control in County Governments**

The research objective tried to establish whether the degree of awareness on methods of forensic accounting influenced fraud Control in County Governments in Kenya. Results from descriptive statistics established that majority of the employees in the County Government did not know various methods of forensic accounting which could be used in fraud control. Several factors were identified as the key bottlenecks on the level of awareness on forensic accounting methods and techniques. Although most county governments had clear codes of conduct which governed employees while carrying day to day office tasks, there was no proper oversight over fraud risk. In addition, county governments did not conduct adequate training which could enhance the level of fraud awareness. For instance, most county governments did not carry continuous seminars and workshops on fraud control which would disseminate information on how forensic accounting techniques could be applied. All in all, the results confirmed that there was a favorable statistical association between awareness on methods for forensic accounting and fraud control in County Governments in Kenya although it appeared weak.

### **5.1.4 Influence of forensic accounting skills on Fraud Control**

The fourth goal of the study was to assist county managers to understand whether skills on forensic accounting could aid in fraud control within County Governments in Kenya. Findings revealed that engagement of forensic accountants would contribute

immensely on fraud control. Specifically, it was established that engagement of experts in the county government brought the necessary skills which would help to combat fraud. It was also established that most county government's accountants as well as top executives did not possess skill and expertise on fraud control. In general, it was confirmed that working with experts on forensic accounting would significantly contribute to fraud control even though forensic accountants may not form part of county government's organizational structure. The general implication of this study was that, the more practitioners perceived the benefit of adopting forensic accounting, the more they needed to apply forensic accounting skills.

## **5.2 Conclusion**

The rationalization of the research problem could not be challenged because graft as remained a deep wound in the County Governments in Kenya. The degree at which fraud is extending its roots in the County government and the perceived desperation by the citizens had got the attention of the researcher which was the key driver for carrying this research. The research heavily relied on quantitative data with supplement of qualitative data to survey the contribution of forensic accounting on fraud control in the County government in Kenya. First and foremost, the researcher study identified the influence of policies on forensic accounting on fraud control. Besides, it surveyed the opinions and feelings of county staff on the use of fraud management tools as a mechanism for fraud control. The study also explored the level of awareness on the methods of forensic accounting as well as the contribution of forensic accounting skills on fraud control in County Governments in Kenya.

The findings revealed that policies on forensic accounting were not properly enforced by county government employees to counter fraud. The study established that there were a number of policies which could be used to combat fraud such as use of fraud

control plan, zero tolerance to fraud and corruption, fraud reporting mechanism and policy on checking and updating of inventory. Out of the four, the policy on checking and updating of inventory was properly adhered to but others merely appeared on county government sign boards and policy manuals. It was established that many county governments had no policy on fraud reporting and fraud control plan. Equally, counties where fraud reporting and fraud control plan existed, their implementation in fraud control was very low.

Results on use of fraud management tools revealed that county governments used both traditional and modern tools to control fraud menace. However, it was established that most counties used traditional fraud control tools which had loop holes compared to the use of modern tools and techniques control fraud. However, most employees perceived that incorporation of modern fraud management tools would reduce fraud to a large extent. In addition, many County Government employees did not adhere to the laid down rules and regulations which appeared wanting hence there was need for county executive to enhance compliance to the laid down rules and procedures. On the other hand, counties needed to carry adequate risk assessment because it appeared to be a fundamental tool in fraud control.

The study further established that use of methods on forensic accounting would increase the level of fraud awareness in the County Governments in Kenya. The study established that holding of workshops and seminars would greatly enhance awareness of methods on forensic accounting because very few employees were cognizant of the new discipline. Similarly, counties needed to establish proper codes of conduct particularly on forensic accounting because it would play a major role on oversight of fraud risk.

Application of forensic accounting skills had not grown immensely in the county Governments in Kenya. It was alleged that counties needed to engage forensic accountants because fraud menace reduced once they were put on board. Equally, engagement of specialists in the area of forensic accounting could reduce fraud because county employees as well as executives had no adequate knowledge in forensic accounting. On the other hand, County Government accountants needs to acquire skills in forensic accounting because they would enhance their knowledge and expertise on fraud control.

Generally, study results indicated that the association amongst the predictor variables and the criterion variable was significant; the researcher therefore concluded that forensic accounting policies, fraud management tools, awareness on methods of forensic accounting and forensic accounting skills had a considerable influence on fraud control. Fundamentally, the research problem provided an outstanding insight on the perception of county employees towards forensic accounting. Besides, findings revealed extent to which the discipline of forensic accounting has been applied in fraud control and the gaps which needs to be filled in county governments in Kenya.

### **5.3 Recommendations**

With respect to the findings of this study and in the spirit of curtailing fraud in county government and other government entities, it is recommended that organizations should adopt forensic accounting in their quest to control fraud. Precisely, reliable empirical evidence has revealed that traditional fraud deterrence and alleviation approaches have proved to be least effective in battling fraud menace. It is therefore recommended that organizations need to apply modern tools and techniques to assist in fraud reduction. Equally, organizations need to ensure that they comply with regulations on fraud control to curtail upsurge of fraud incidences in the county



governments in Kenya. In addition, organization's needs to incorporate fraud risk management tools in order to control prevalence of risk as a result of fraud.

Governments departments both from the national and county government needs to come up with right policies which support forensic accounting discipline to enhance global trend in fraud control. Particularly, county government needs to establish and implement robust fraud control plan to assist in the development of organization's anti-fraud strategies. Likewise, it is recommended that organizations need to develop an effective fraud reporting mechanism to enhance timely exposure of fraud incidences. Equally, county governments need to ensure that employees adhere to zero tolerance to fraud policy.

The study also commends that county government employee's needs adequate training and workshops on methods of forensic accounting which can impact knowledge and skills on fraud control. Similarly, organization's needs to ensure that there is proper oversight over fraud risk which is useful in prevention and detection of fraud. This was in view of the fact that forensic accounting policies, fraud management tools and degree of awareness on methods of forensic accounting can be recognized as the key bottlenecks to fraud control in the County Governments in Kenya.

Accounting experts and consumers needs more information on the importance of forensic accounting and how it can be used to eradicate fraud. Moreover, all employees in the county governments need to spot areas susceptible to fraud in order to build concerted effort to eradicate fraud in the organizations. Particularly, county government needs to outsource fraud experts who can add in skills in forensic accounting which may not form part of the organization structure in order to eradicate

fraud within departments. To further deter perpetration of fraud, accountant as well as executive needs to acquire adequate skills and knowledge on prevention and detection of fraud. Finally, all regulatory bodies irrespective of the professions they are accredited to needs to incorporate aspects of forensic accounting as a requirement for full membership accreditation in their respective bodies.

#### **5.4 Recommendation for Further Research**

Present research was confined to forensic accounting and fraud control in the county Governments in Kenya. Particularly the study was constrained to forensic accounting policies, fraud management tools, awareness on methods of forensic accounting and application of forensic accounting skills on fraud control. Forensic accounting policy involved attributes such as fraud control plan, fraud reporting policy and policy on zero tolerance to fraud. Further study needs to be done to establish how fraud control plan can enhance fraud control. Likewise, reporting of incidences of fraud has not been very effective in many organizations across the globe; therefore, additional study can be done to establish whether fraud reporting policy can assist in eradication of fraud incidences. Additionally, government institutions have not been able to implement zero tolerant to fraud policy although it appears inscribed in institutions notice boards. Therefore, satisfactory study needs to be done on its effectiveness on detection and prevention of fraud.

Modern and traditional fraud management tools contribute to a certain degree on reduction of fraud. This therefore calls for another study which would explore the contribution of either modern or traditional fraud management tools on fraud control. Similarly, additional study needs to be done to determine whether compliance to rules and regulations led to fraud control. Particularly, a further study should be done to establish how incorporation of risk management tools assist in fraud control.

To enhance fraud control, a study needs to be done on the contribution of awareness on forensic accounting methods in fraud control. A study on the influence of fraud risk oversight is very essential to enlist various ways to counter fraud incidences. Further, a study on the application of forensic accounting skills on fraud control would assist county governments to understand the skills necessary in forensic accounting.

Outsourcing of fraud experts can also introduce necessary skills to deter perpetration of fraud. Thus, a study needs to be done to find out whether engagement of experts in forensic accounting would assist in alleviation of fraud incidences. Lastly, a study needs to be done to establish whether finance team and top management needs expertise in fraud detection and prevention to alleviate fraud menace.

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## **APPENDIX I: LETTER OF TRANSMITTAL**

JEPHITHA KIRIMI KARUTI,  
Kenya Methodist University,  
Department of Business and Economics.

Dear Respondent,

### **RE: INTRODUCTORY LETTER FOR RESEARCH INSTRUMENTS.**

Kindly respond to the attached questionnaire. Your honest response will be critical in ensuring fairness of the research findings. The information provided will be treated with uttermost confidentiality. The findings of this research will solely be used for academic research purposes and to enhance knowledge in the area of study.

Thank you for your support.

Yours Faithfully,

Jephitha Kirimi Karuti



## APPENDIX II: QUESTIONNAIRE FOR THE COUNTY STAFF

### SECTION A: Demographic Data

Instruction: Kindly indicate with a tick the appropriate option accordingly

#### Indicate your gender

1. Male [     ]  
2. Female [     ]

#### Age bracket

1. 1. Less than 30 Years [     ]  
2. 2. 30 - 45 Years [     ]  
3. 3. 45 and above [     ]

#### Highest academic level attained

4. Bachelors degree [     ]  
5. Masters degree [     ]  
6. Doctorate degree [     ]

State your Professional qualification if any

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#### Years of experience in a senior position

1. Less than 5 years [     ]  
2. 5-10 years [     ]  
3. More, than 10 years [     ]

#### Year of experience with devolved government

1. Less than five [     ]  
2. More than five [     ]

### SECTION B: Questions with Item Capturing Data on Study Objectives.

Using a single mark against one of the box indicate your level of opinion / satisfaction for each sub question in the table below. Don't mark or give two opinion answers for a question. The scale of strongly disagree (SD) disagree (D), neutral (U), agree (A) and strongly agree (SA) is used. Observe the code and mark appropriately

**(i). implementation of forensic accounting policies**

	Item	SD	D	U	A	SA
1	There are forensic Accounting Policies in the County Government					
2	There is fraud control plan to Curb Fraud					
3	Our county has a policy of zero tolerance to fraud communicated to employees					
4	There is an effective fraud reporting mechanism in the county government.					
5	We have a Policy to check and update inventory to reduce cases of fraud in the county					

Suggest any other policy that can be incorporated in the management to reduce and detect fraud in organizations

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**ii. Extent of fraud control by use of fraud management tools**

	Item	SD	D	U	A	SA
1	County government used both traditional and modern fraud management tools					
2	Traditional Tools Have Loopholes					
3	Modern Technology Leads to reduction in Fraud					
4	Improvement on Regulatory Compliance reduced Fraud					
5	Proper Fraud Risk Management Tools can Control Fraud					
6	Fraud Risk Assessment Mitigates Internal and External Fraud					

Give a few traditional fraud management tools/ approaches as well as modern fraud management tools/ approaches used in your county to curb occurrence of fraud. Give your opinion on their effectiveness.

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**iii. Level of awareness on forensic Accounting**

	Awareness on methods of forensic accounting	<b>SD</b>	<b>D</b>	<b>U</b>	<b>A</b>	<b>SA</b>
1	Employees in the county government are aware of forensic accounting methods used on fraud control					
2	The management has code of conduct that govern the ethical behavior of employees					
3	There are frequent seminars and workshops on issues and methods of forensic accounting					
4	There is established process for oversight of fraud Risks					
5	Employees are aware that forensic accounting methods used to detect attempts to commit fraud whether financial or non-financial can curb fraud.					
6	Having few cases of fraud reported in the county would mean the forensic accounting methods put in place are functioning well					

How are employees in your county government made aware of types of fraud and subsequent consequences for committing a fraudulent act?

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**iv. Application of Forensic Accounting skills**

	Forensic Accounting skills	SD	D	U	A	SA
1	Fraud has reduced through the use of forensic skills in County Governments					
2	Fraud cases dropped after engagement of forensic accountants					
3	County government outsource fraud experts to detect fraudulent activities					
4	County Governments Accountants are Skilled to detect Fraud					
5	The top executives members are knowledgeable on prevention and detection of fraudulent activities					

Comment on whether the accountants in the county governments are frequently empowered with skills on fraud control.

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**v. Fraud Control**

	Fraud Prevention and Detection	SD	D	U	A	SA
1	According to records it is noticeable that fraud management policies lead to reduction of cases of fraud					
2	Fraud cases reduced in the county government after the frequency of internal control measures were increased, eg updating inventories, using traditional or modern approach.					
3	Increased frequency and use of modern technology to monitor, keep record of transactions made, backing up of data within the office and database lead to reduction of fraud cases					

### APPENDIX III: INTERVIEW SCHEDULE FOR COUNTY SECRETARY

Kindly let me know what age group you belong

1. Less than 45 year [       ]       2. Over 45 years [       ]

What is your highest academic level?

1. Bachelors degree [       ]  
2. Masters degree [       ]  
3. Doctorate degree [       ]

For how long been in such a senior position? (If it applies)

1. Less than 5 years [       ]  
2. 5-10 years [       ]  
3. More, than 10 years [       ]

Year of experience in politics

1. Less than five [       ]  
2. Five to ten years [       ]  
3. More than ten year [       ]

- i. Briefly elaborate the criterion of recruiting employees in the county, in relation to age, working experience, skills and whether they are politically instigated.
- ii. Has your county incorporated forensic accounting policies in the mainstream policy guidelines to prevent and deter perpetration of fraud.
- iii. Do you believe employees, community and other stakeholders in the county are aware of fraud? What steps have you taken to ensure that all the stakeholders are sensitized?
- iv. Most county government use surveillance security systems to control fraud in Kenya. What is your comment in connection to use of these security systems in relation to fraud control.
- v. What measures have you put in place to counter fraudulent activities? For instance monitoring and evaluating financial statements, detecting and exposing fraudulent acts.
- vi. Has your county employed experts in forensic accounting? If not briefly explain whether they outsource this experts?

- vii. Is there any case of fraud which has been detected in your county? What action did the management take?

Thank you for getting involved in the study.

## APPENDIX IV: AUTHORIZATION LETTER



# Kenya Methodist University

P.O. Box 267-60202  
Meru, Kenya  
Email: [info@kemu.ac.ke](mailto:info@kemu.ac.ke)

Tel: (+254-020) 2118423-7, 064-30301/31229  
Fax: (+254-064) 30162  
website: [www.kemu.ac.ke](http://www.kemu.ac.ke)

April 6, 2018

Executive Secretary  
National Council for Science and Technology  
P.O Box 30623 – 00100  
**NAIROBI**

Dear Sir/ Madam,

**RE: KARUTI JEPHITHA KIRIMI – BUS-4-0131-1/2016**

This is to confirm that the above named is a bona fide student of Kenya Methodist University pursuing a Doctor of Philosophy Business Administration and Management.

Jephitha is undertaking a research study on “Forensic Accounting and Fraud Control in County Governments in Kenya”. To successfully complete his research work, he requires relevant data in his area of study.

In this regard, we kindly request your office to issue him a research permit to enable him collect the data for his academic research work.

We thank you in advance for your cooperation.

Yours faithfully,

Dr. Evangeline Gichunge  
Associate Dean, Research Development & Board of Postgraduate Studies



Nairobi Campus: Koinange Street, P.O Box 45240-000100 Nairobi - Tel. +254-20-2118443/2248172/2247987/0725-751878. Fax +254-20-2248160. Email: [nairobicampus@kemu.ac.ke](mailto:nairobicampus@kemu.ac.ke)  
Nakuru Campus: Mache Plaza, 4th Floor. P.O Box 3654-20100, Nakuru, Tel +254-51-2214456 Fax 051-2216446, Email: [nakurucampus@kemu.ac.ke](mailto:nakurucampus@kemu.ac.ke)  
Mombasa Campus: Former Oshwal Academy, P.O. Box 89983, Mombasa. Tel: +254-412495945/8, Fax 041-2495946. Email [mombasacampus@kemu.ac.ke](mailto:mombasacampus@kemu.ac.ke)  
Nyeri Campus: Sohan Plaza, 4th Floor. Tel: +254-61-2032904. Fax 254-61-2034100, Email. [nyericampus@kemu.ac.ke](mailto:nyericampus@kemu.ac.ke)

**The Future is Here!**

## APPENDIX V: NACOSTI LETTER



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020 400 7000,  
0713 788787,0735404245  
Fax: +254-20-318245,318249  
Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/60469/22244**

Date: **24<sup>th</sup> April, 2018**

Jephitha Kirimi Karuti  
Kenya Methodist University  
P.O. Box 267 – 60200  
**MERU.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on “*Forensic accounting and fraud control in county governments in Kenya*” I am pleased to inform you that you have been authorized to undertake research in **all Counties** for the period ending **23<sup>rd</sup> April, 2019**.

You are advised to report to **the County Commissioners and the County Directors of Education, all Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

**DR. STEPHEN K. KIRJRU, PhD.**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioners  
all Counties.

The County Directors of Education  
all Counties.