

**The Role of Fraud Management Policies in Mitigating the Severity and  
Reporting of Fraud Cases in the Public Sector: The Case of County  
Governments in Western Kenya**

**Brian Omondi Onyango**

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Brian Omondi Onyango

Reg No. **100951**

**Signature:**



**Date:** 2<sup>nd</sup> September 2022

### Approval

The Thesis of Brian Omondi Onyango was reviewed and approved by the following:

**Supervisor:**

Dr. David Mathuva:

Senior Lecturer

Strathmore Business School

**Signature:**



**Date:** 2<sup>nd</sup> September 2022

## **ABSTRACT**

In the twenty-first century, fraud has become a problem that management and other stakeholders are working hard to resolve. In the Kenyan County Governments, fraud is on the rise, despite ongoing efforts by the office of the auditor general and other state investigative agencies to combat it. This study sought to investigate the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector in 11 selected county governments in western Kenya. More specifically, the study sought to investigate the role fraud control plans, mechanisms for reporting fraud and zero-tolerance to fraud policies influence the severity and reporting of fraud cases. The study borrowed from the fraud triangle and deterrence theory to address the general objective. Guided by a positivist research paradigm, primary data using a drop and pick questionnaire were collected from 316 respondents from the 11 county governments who included accountants, external and internal auditors and forensic investigative personnel. The data were analyzed using principal component-factor analyses, spearman correlations and ordered logistic regression approaches. The relevant descriptive and inferential statistics were also employed in the analyses. According to the results, two important fraud management aspects were established: deterrence effect of fraud management policies and fraud case reporting instances. The results illustrate that having an anti-fraud plan with zero tolerance to fraud, an independent fraud reporting system and deploying an integrated macro policy in the fight against fraud are useful mechanisms in deterring and combating the risk of fraud. The results also show that installing a fraud reporting system with real consequences to the offenders leads to an increase in the reporting of fraud cases. In line with the results, a strict anti-fraud plan with zero tolerance to fraud is useful in encouraging more fraud cases to be reported. Further, the deployment of an integrated macro policy on fraud might lead to reduced fraud case reporting. According to the study's findings, county governments in Kenya should adopt fraud management policies to assist in reducing the severity of fraud and help in timely reporting and handling of fraud cases. The findings are useful in informing fraud risk management policies in the counties as well as other public sector entities.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>i</b>
<b>ABSTRACT.....</b>	<b>ii</b>
<b>LISTS OF FIGURES.....</b>	<b>viii</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS.....</b>	<b>x</b>
<b>DEFINITION OF OPERATIONAL TERMS.....</b>	<b>xi</b>
<b>ACKNOWLEDGMENTS .....</b>	<b>xii</b>
<b>DEDICATION.....</b>	<b>xiii</b>
<b>CHAPTER ONE: INTRODUCTION .....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.1.1 Fraud Management Policies and reporting of fraud cases in the public sector. ....	4
1.1.2 Kenyan County Governments. ....	5
1.2 The Problem Statement .....	6
1.3 Objectives of the Study .....	8
1.3.1 General Objective .....	8
1.3.2 Specific Objective of the Study .....	8
1.4 Research Question .....	8
1.5 The Scope of the Study .....	9
1.6 The Significance of the Study.....	9
1.6.1 Policymakers and the Government.....	9
1.6.2 Researchers and Scholars. ....	9
1.6.3 County Governments. ....	10
1.7 Chapter summary .....	10

<b>CHAPTER TWO: LITERATURE REVIEW .....</b>	<b>11</b>
2.1 Introduction .....	11
2.2 Theoretical Framework .....	11
2.2.1 The Fraud Triangle Theory .....	11
2.2.2 Deterrence Theory .....	13
2.3 The Empirical Review.....	15
2.3.1 The role of a fraud control plan in mitigating the severity and improved reporting of fraud cases 15	
2.3.2 Contribution of Mechanism for reporting fraud towards minimizing the severity and improved reporting of fraud cases .....	17
2.3.3 The role of Zero tolerance to fraud policies with regard to reducing the severity and improved reporting of fraud cases .....	18
2.4 The summary of Literature Review and Research Gap .....	20
2.5 Conceptual Framework .....	24
2.6 Operationalization of Variables. ....	25
2.7 Chapter Summary .....	27
<b>CHAPTER THREE: RESEARCH METHODOLOGY. ....</b>	<b>28</b>
3.1 Introduction .....	28
3.2 Research Philosophy. ....	28
3.3 Research Design .....	28
3.4 Target Population.....	29
3.5 Sampling Procedure and Sample Size. ....	30
3.5.1 The sample and the respondents. ....	30
3.6 Data Collection Techniques and Procedure .....	31
3.7 Data collection procedures .....	31

3.8	Research Quality .....	32
3.8.1	Reliability test.....	32
3.8.2	Validity test .....	33
3.9	Data analysis and presentation.....	33
3.10	Ethical Considerations.....	35
<b>CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS.....</b>		<b>36</b>
4.1	Introduction .....	36
4.2	Response rate.....	36
4.2.1	Demographic profile of the respondents .....	37
4.2.1.1	Respondents' Organizations .....	38
4.2.1.2	Gender of respondents.....	38
4.2.1.3	Job occupation of the respondents .....	39
4.2.1.4	Respondents' qualifications.....	39
4.2.1.4	Respondents' professional certification.....	39
4.2.1.4	Respondents' years of professional experience.....	40
4.3	Descriptive Statistical findings .....	40
4.3.1	Descriptive results Plan for fraud control .....	40
4.3.2	Descriptive results for Mechanism for reporting fraud.....	41
4.3.3	Descriptive results for Policy of zero tolerance for fraud .....	43
4.3.4	Descriptive results for fraud severity and reported cases.....	44
4.4	Diagnostic Tests .....	45
4.4.1	Normality test .....	45
4.5	Principal Component-Factor Analysis (PCFA).....	47
4.5.1.	PCFA analysis for the independent variables.....	47

4.5.2	PCFA analysis for the dependent variable .....	52
4.4.3	Correlation analysis .....	55
4.4.3	Ordinal (Ordered) Logistic Regression.....	57
<b>CHAPTER FIVE: DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS.....</b>		<b>62</b>
5.1	Introduction .....	62
5.2	Discussion of findings.....	62
5.2.1	The role of a fraud control plan in mitigating the severity and improved reporting of fraud cases	62
5.2.2	Contribution of Mechanism for reporting fraud towards minimizing the severity and improved reporting of fraud cases .....	63
5.2.3	The role of Zero tolerance to fraud policies with regard to reducing the severity and improved reporting of fraud cases .....	65
5.2.4	Fraud severity and reported cases. ....	66
5.3	Conclusion.....	67
5.4	Recommendations.....	69
5.4.1	Policy recommendations .....	69
5.4.2	Managerial recommendations .....	69
5.4.3	Recommendations for further research.....	69
5.5	Limitation of the study .....	70
5.5.1	Timing of the study .....	70
5.5.2	The scope of the study based on time .....	70
5.5.3	Limits of research methodologies and tools used.....	70
<b>REFERENCES.....</b>		<b>72</b>
<b>APPENDICES.....</b>		<b>79</b>

<b>APPENDIX 1:</b>	<b>A LETTER OF INTRODUCTION.....</b>	<b>79</b>
<b>APPENDIX 2:</b>	<b>QUESTIONNAIRE TO THE COUNTIES AND OAG .....</b>	<b>80</b>
<b>APPENDIX 3:</b>	<b>EMAIL TO RESPONDENTS FOR ONLINE QUESTIONNAIRE .....</b>	<b>87</b>
<b>APPENDIX 4:</b>	<b>PARTICIPANTS INFORMED CONSENT.....</b>	<b>88</b>
<b>APPENDIX 5:</b>	<b>LIST OF COUNTY GOVERNMENTS IN THE SAMPLE .....</b>	<b>91</b>
<b>APPENDIX 6:</b>	<b>FULL RESULTS FOR REGRESSION MODEL 1 – FRAUD DETERRENCE MODEL.....</b>	<b>92</b>
<b>APPENDIX 7:</b>	<b>FULL RESULTS FOR REGRESSION MODEL 2 –FRAUD CASE REPORTING MODEL .....</b>	<b>93</b>
<b>APPENDIX 8:</b>	<b>LETTER OF ETHICAL APPROVAL TO CONDUCT RESEARCH ..</b>	<b>94</b>
<b>APPENDIX 9:</b>	<b>PERMISSION TO CONDUCT RESEARCH FROM NACOSTI .....</b>	<b>95</b>



## LISTS OF FIGURES

Figure 2. 1:	Conceptual Framework .....	25
Figure 4. 1:	Research response rate .....	36
Figure 4. 2:	Normality test using box plots .....	46
Figure 4. 3:	Probability plots for the dependent variables.....	46
Figure 4. 4:	Scree Plot of Eigenvalues.....	51
Figure 4. 5:	Scree plot for the eigenvalues – dependent variable .....	54

## LIST OF TABLES

Table 2. 1:	Key Studies and Research Gaps .....	20
Table 2. 2:	Operationalization of Variables. ....	25
Table 3. 1:	Target Population .....	29
Table 3. 2:	Sample Size.....	30
Table 3. 3:	Reliability test results.....	32
Table 4. 1:	Demographic characteristics.....	37
Table 4. 2:	Plan for fraud control results .....	40
Table 4. 3:	Mechanism for reporting fraud results .....	42
Table 4. 4:	Policy of zero tolerance for fraud results.....	43
Table 4. 5:	Fraud severity and reported cases .....	44
Table 4. 6:	Variance inflation factors and tolerance .....	46
Table 4. 7:	Kruskal–Wallis equality-of-populations rank test.....	47
Table 4. 8:	Eigen Values and Sampling Adequacy Tests.....	47
Table 4. 9:	Principal Component Analysis-Factor Analysis .....	49
Table 4. 10:	Factor loadings for the dependent variable .....	52
Table 4. 11:	Eigen values– dependent variable.....	53
Table 4. 12:	Spearman’s Rank Correlation results .....	56
Table 4. 13:	Ordered Logistic Regression results- Reported cases Model.....	58
Table 4. 14:	Ordered Logistic Regression results- Fraud Severity model.....	60

## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>ACFE</b>	Association of Certified Fraud Examiners
<b>CPAs</b>	Certified Public Accountants
<b>EACC</b>	Ethics and Anti-Corruption Commission
<b>FCP</b>	Fraud Control Plan
<b>NACOSTI</b>	National Commission for Science, Technology, and Innovation
<b>NFA</b>	National Fraud Authority
<b>OAG</b>	Office of the Auditor General
<b>SEM</b>	Structural Equation Model
<b>TDF</b>	Techniques for Detecting Fraud
<b>TFP</b>	Techniques for Fraud Prevention
<b>ANOVA</b>	Analysis of Variance
<b>ICPAK</b>	Institute of Certified Public Accountants of Kenya
<b>INTOSAI</b>	International Organization of Supreme Audit Institutions
<b>KMO</b>	Kaiser-Meyer-Olkin
<b>PCA</b>	Principal Component Analysis
<b>PC</b>	Percent
<b>PwC</b>	Price Waterhouse Coopers
<b>SESRC</b>	Strathmore Institutional Ethics and Scientific Review Committee
<b>SPSS</b>	Statistical Package for the Social Science

## DEFINITION OF OPERATIONAL TERMS

<b>Fraud Management Policies</b>	Practices that raise awareness amongst employees that fraud response plans have been developed to deal with and lessen the damage caused by any fraudulent attack (ACFE, 2021).
<b>Fraud Prevention</b>	These are strategies implemented by institutions to reduce the likelihood of resource waste (Alamer, 2015)
<b>Fraud Detection</b>	These are control measures implemented by institutions to reduce the possibility of institutional resource waste (Mat et al., 2013)
<b>A plan for fraud control</b>	A Fraud Control Plan is a plan or method that is responsibly planned and implemented in order to avoid fraud in an organization (KPK, 2014).
<b>Mechanism for reporting fraud</b>	A Mechanism for reporting fraud is a technique used by fraud reporters to relay information regarding various perceived and actual fraudulent activities to the relevant authorities (NFA, 2010)
<b>Policy of zero tolerance for fraud</b>	According to Khadra and Delen (2020), the Policy of zero tolerance for fraud refers to a scenario whereby the relevant authorities have put in place mechanism to ensure that fraud is unacceptable at whatever level.

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## **DEDICATION**

This study is dedicated to my late mother, Mama Priscah Onyango, who was a firm believer in education. She was always there for me when it came to matters of education. I dedicate this study to my father, Mzee Dan Onyango Mohol, for his support and unending prayers. I also dedicate this study to my sons Harvey and Chiwo, as well as my unborn children, whom I hope will be bright and enthusiastic about education. This research is dedicated to my members of staff for their support which has helped me continue along the arduous path of writing towards a finished thesis. Finally, I dedicate this research to anyone who's trying to make the world a better place by fighting fraud.

## **CHAPTER ONE: INTRODUCTION**

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

Fraud is a threat to all businesses (Khadra & Delen, 2020). The impact of fraud on states, organizations, and citizens is the same: the rule of law is undermined, rights are violated, the institution is not transparent, public resources are lost, and national integrity is weakened. As a result, fraud and its consequences have become a worldwide issue (Khadra & Delen, 2020). Employees, individuals outside the business, or another organization benefit directly or indirectly from fraud to the disadvantage of the organization (Erbuga, 2020a). Some examples of fraud are: accepting bribes or gifts; diverting a potentially profitable transaction to an employee or person outside the organization that would otherwise generate profit for the organization; fraud, which is usually the misappropriation of money or property, and the falsification of financial information for the purpose of concealing the act, thus making it difficult to detect; intentionally concealing or misrepresenting events, transactions, or data; unauthorized or illegal use of confidential or proprietary information; unauthorized or illegal handling of computer networks or operating systems, theft, and so on.

The entire cost of fraud is difficult to assess objectively, and calculating the indirect damages caused by fraud was even more challenging. Some scams will go undetected for a long time. As a result, the study can only discuss in terms of fraud loss estimates. The results of the survey, which were based on national fraud reports, were published by the Association of Certified Fraud Examiners (ACFE, 2021). Fraud cost firms throughout the world an average of 5% of their annual income. Effective fraud resolution necessitates coordinated and strategic effort from international, national, and local partners who are aware of the problem and its importance. States should adopt laws and regulations at the national and local levels to deter fraudsters from participating in the process, and those who do should be suitably sanctioned. The problems of business fraud, which result in a loss of profit and assets for the firm as well as a loss of reputation, can be solved by implementing forensic accounting procedures and building an anti-fraud strategy.

The current operating environment is ripe for fraud. Large companies across the world such as Enron, WorldCom, Satyam, and Lucent are darned for their ending because of money-related fraud. For that reason, mechanisms for detecting and assessing financial fraud should be created (Yue et al., 2017). Financial fraud is a threat to the accounting and auditing professions, necessitating the development of countermeasures. Even though fraud can be detected, the effectiveness of fraud detection is a difficult task in the accounting profession. Historically, auditors have been unable to save fraud from happening because of a loss of required facts mining skills, inexperience due to its low frequency, and the use of non-computerized computer systems (Ngai et al., 2020). According to a study, 25 percent of business firms in India are affected by financial misconduct, demonstrating the importance and depth of corporate fraud. Fraud in corporate organizations involves large sums of money and causes hostility in a variety of industries. According to a study conducted in the year 2021, 0.5 p.c of fraud perpetrators were non – management staff (KPMG Malaysia, 2021). In contrast, this category of fraud perpetrators represented about 0.34 p.c in the year 2009, a daunting detail to the government and the management since there was a 0.16 p.c increase the subsequent year. The customers were the second commonest variety of fraud perpetrators, who were followed by those in positions of management, who represented 0.18 p.c respectively. Others discovered included perpetrators who charge 0.08 for services and suppliers who charge 0.06. The data also revealed that the rate of stealing outgoing funds was highest in 2013, at 0.67 percent, compared to 0.57 percent in 2019. The theft of physical assets was ranked at 0.58, followed by the theft of incoming resources at 0.34. Individual assessments revealed that theft of money and cash receipts (0.26 p.c) was the foremost common kind of fraud followed by inaccurate billing (0.16 p.c), and stock larceny (0.13 p.c) (KPMG Malaysia, 2021). According to Ernst and Young (2020), governments and firms agree that corruption and felony are prejudicial to businesses and that vital steps ought to be taken to scale them back.

The augmented variety of fraud cases in Nigeria for example has been blamed on the government's dilapidation in providing social amenities. According to Modugu and Anyaduba (2018), there is a negative perception of state auditors for failing to prevent embezzlement or misuse of public funds within the state departments. For this reason, the use of fraud management policies in mitigating the severity and reporting of fraud cases is highly recommended. It is dire because only 20% of Nigeria's population bears the brunt of the country's revenue (Abdullahi & Mansor, 2018). This results in skewed resource distribution.



Even though Nigeria is Africa's largest oil producer, at least 70% of its population lives in poverty because of corruption and resource mismanagement (Adebisi & Gbegi, 2015).

Since the country's independence in 1963, fraud has been a major issue in Kenya (Nyamu, 2012). The introduction of devolved county government systems in 2013 didn't help the situation, although several legislations and laws, such as the 2016 Bribery Law, the 2016 Public Procurement & Disposals Act, and the law on Proceeds of Crime & Anti-Money Laundering of 2009, have been enacted to combat fraud. Individuals pay bribes to reap authorities' offerings (EACC, 2017). Wajir County recorded the very best percent of these searching for public offerings paying bribes (ninety percent), observed with the aid of using Meru County (88. five percent), Trans Nzoia County (83. three percent), and Kajiado County (81. five percent) (EACC, 2017). According to the 2019-2020 Auditor General's report, a few counties, inclusive of West Pokot, incurred excess expenses in violation of the Public Finance Management Regulations 2015. According to a similar report, the Wajir County government had cases of unreconciled inventory, whereas Uasin Gishu County government reported cases of inaccuracies within the financial reports and unaccounted for revenue (Auditor-General, 2019). According to an equivalent Auditor General's report, most Kenyan Counties lack an internal audit section and a functional audit committee to observe the governance process, responsibility process, and management systems (Auditor-General, 2019). This provides the impression that most counties are having issues implementing fraud prevention and detection techniques and have many fraud cases reported; it additionally implies that the Counties either have weak fraud detection and prevention techniques or haven't enforced the antecedently counseled techniques.

Previous studies have focused on the role of fraud management policies in mitigating the severity and reporting of fraud cases in the private sectors (Abdulrasheed et al., 2018; Fadipe-Joseph & Titiloye, 2016; Inaya & Isito, 2016; Kanu & Okorafor, 2018; Kawugana & Faruna, 2018; Odi, 2020; Owolabi, 2019; Uchenna & Agbo, 2018). Most of these studies were done in Nigeria, and they didn't really pay attention to the relationship between fraud management policies and the severity and reporting of fraud incidents. Kiragu et al. (2015) pointed out that there was a noteworthy absence of study in Kenya on the connection between preventative, detective, and responsive fraud management policies (deposit money bank fraud management policies) and non-financial bank performance (efficiency and operational performance). Based on this identified problem and gaps, this study sought to identify the role of fraud management

policies in mitigating the severity and reporting of fraud cases in the public sector, a case study of Western Kenya's County Governments.

### **1.1.1 Fraud Management Policies and reporting of fraud cases in the public sector.**

Fraud management policies are anti-fraud policies that informs employees that action plans have been developed to deal with and lessen the harm caused by any fraudulent assault. For the purpose of this study, a plan for fraud control, a mechanism for reporting fraud and a policy of zero tolerance for fraud will be used as the fraud management policies. Public sector entities as non-profit organizations aim to contribute to the public good. The management's capacity to institutionalize effective and efficient fraud management policies will determine whether these objectives are met. According to Fatoki (2020), high and lower-level managers of public sector organizations were vulnerable to internal fraud threats, which had a negative impact on their operational performance globally. All public sector organizations face fraud threats on a global scale. Numerous fraud-related actions within public sector organizations have resulted in the collapse, enormous losses on investments, high legal fees, the incarceration of important individuals, and a loss of trust in the public sector organizations.

In the USA, among other financial fraudulent activities affecting publicly traded companies, investors lost \$180 billion in the World Com fraud scandal of 2002, \$150 million in the Tyco scandal of 2002, \$1.4 billion in the Heath South scandal of 2003 (the largest publicly traded company), and \$3.9 billion in the America International Group (AIG) scandal of 2005. Relatively speaking, the majority of public sector companies have faced significant obstacles to achieving their desired performance, including fraud activities and inadequate internal control systems. The majority of public sector entities, particularly in developing nations like Kenya, Ghana, Nigeria, and South Africa among other African countries, experienced a decline in performance and collapse of public sector entities, as noted by (Uwaoma & Ordu, 2019; Gitau & Samson, 2016; Kinyua, 2019) due to public sector organizations' failure to implement high-tech controls that correspond to the fraud innovation methods used by those organizations.

The erosion of public trust and top public officials' fraud activities, which have led to financial hardship, have been the two main issues facing Kenya's public sector over the past 20 years. Poor management of public resources is the result of the rise in fraud activities in Kenya's

public sector. Because of its slowness, Kenya's legal system is unable to curb fraud-related actions. The delayed Kenyan legal system's response to fraud in the public sector has encouraged ongoing deception among top officials, directors, and executives, which has resulted in a steady fall in performance and the demise of the majority of these organizations.

### **1.1.2 Kenyan County Governments.**

CoK (2010) established 47 counties based on the previous administrative districts established by Kenyan Provinces and Districts Act that was enacted in the year 1992. The devolved units as they are commonly referred to CoK (2010), oversee the implementation of the development agenda within the counties. This is done through consultations with the Kenyan National Government. The implementation of the development agenda within the devolved units is usually undertaken annually through budget allocation to various counties. Despite the budget allocation to various counties, it is common knowledge that the county governments continue to encounter various financial challenges because of corruption, misappropriation of funds, and ineffective financial systems (Adari, 2007). Fraud-related cases have been witnessed in various state agencies as per the auditor general reports on the performance of those agencies. It is against this backdrop therefore that fraud prevention necessitates a larger embrace of moral practice as well as a working relationship between the devolved units and the Kenyan national governments with a clear and formidable approach to fighting fraud.

Devolved units in Kenya encounter fraud risks because of poor implementation of fraud management policies and internal control weaknesses, which frequently result in loss of monies (Njoroge, 2003). Njui (2012) conducted a study on the role of forensic investigations and the strength of internal control systems in the enhancement of better management in public institutions in Kenya. In his findings, he found out that the strength of the internal control system has a significant positive influence on better management within the public institutions in Kenya. He also found that risk management also has a positive influence on corporate governance within public institutions. Finally, the study showed that compliance and consulting have the least influence on the better management of public institutions. In view of this study, it is imperative for county governments to use a unit of purpose to combat and fight fraud. The responsibility of the national government in combating fraud within the devolved units, therefore, is to facilitate the creation of the enabling spaces for the county governments to undertake anti-fraud initiatives effectively and efficiently.

Due to an increase in instances of fraud and misappropriation of public funds by top management, county governments in Kenya have been having issues with a persistent delay in operational performance and ineffective service delivery. Ineffective preventive, investigative, and response fraud management techniques, as well as rising executive and top manager fraud activity, may contribute to Kenya's public sector organizations' subpar performance. Information asymmetry, immoral behavior, ineffective governance frameworks, and moral hazards are additional potential causes of fraud activities that have been found Gitau and Samson (2016), and Kinyua (2016)

## **1.2 The Problem Statement**

Profit and non-profit organizations are both vulnerable to a slew of scams ACFE (2021). In a government setting, fraud can be perpetuated through the denial of government services (Bierstaker et al., 2006). It is against this backdrop therefore that there's a consensus among various stakeholders within the government that institutional procedures within the law should be followed, failing which massive government entities would face losses. This would result in the use of public offices for personal gain. Despite the presence of fraud management policies in Kenyan County Governments, Fraud is still occurring. A strict application of fraud management policies in mitigating the severity and reporting of fraud cases is required to reduce the chances of fraudulent activities occurring (Munir et. al., 2016) The inability of these policies to deter fraud should be beefed up by instituting identifiers for fraud and other relevant fraud prevention strategies. The County government's reliance on external audit reports may fail to produce the desired results even after they have been implemented (OAG, 2020). This could lead to a loss of organizational sustainability, which would bring the service delivery system to a halt. Furthermore, the County government may respond reactively rather than pro-actively because of this discovery (OAG, 2020).

Local studies on the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public and private sector include Sang (2017) and Kiragu et al. (2015) who studied bank size, occupational fraud risk, and investigated the factors that influence the use of fraud management policies in Kenyan commercial banks. Both studies used the survey research design as well as the correlation and regression analysis techniques. They discovered

a strong and positive correlation between bank size and the risk of occupational fraud. The investigations also showed that the banking system has seen a rise in fraud activities due to a lack of comprehensive anti-fraud measures and non-compliance with fraud management policies. This study has a geographical gap because it looked at businesses in the private sector, whose fraud mitigation procedures might be better than those of county governments.

Globally, Njanike et al. (2009) conducted a study on the efficacy of forensic auditing in identifying, investigating, and preventing bank frauds. The study used both descriptive and inferential statistics to analyze the data. According to the findings, forensic auditing departments face a number of difficulties, including a lack of material resources, technical expertise, interference from management, and ambiguous recognition of the profession. As a result, the top bank employees' involvement in bank fraud has increased. In Nigeria, Amanze and Onukwugha (2017) and Olay and Dada (2017) looked at the roles of fraud management policies in the banking industry's loan fraud detection and prevention system. These studies, which employed a survey research design, showed that there was little fraud control in Nigerian banks; the results also showed that fraud management policies including, the risk assessment management; system audit; and financial report verification procedures adopted by the banking sector were unable to stop fraudulent activity among Nigerian banks. The establishment of a multi-agent framework by regulatory authority is a stand-alone system that can detect fraud in the banking industry in Nigeria, according to their studies, which also revealed that fraud management policies captured by risk assessment, system audit, and financial report verification were not statistically significant in mitigating the fraudulent act. Due to their concentration on the banking industry, whose fraud management policies differ from that of the county governments, these studies present a geographical gap.

While the empirical studies that have been conducted on this topic (Sang, 2017; Kiragu et al., 2015; Njanike et al. 2009; Amanze & Onukwugha, 2017; Olay & Dada, 2017) and others are crucial and have made a significant contribution to the literature, it is imperative to investigate the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector in the context of Kenyan County Governments. This is because the empirical studies on this area of study have demonstrated both location contextual gaps and conceptual methodological gaps as has been demonstrated from the local and global studies above.

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective**

The overall aim of this study is to investigate the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector in 11 selected county governments in western Kenya.

#### **1.3.2 Specific Objective of the Study**

The specific objective of this study include:

- i. To establish the role of fraud control plans on mitigating the severity and improved reporting of fraud cases among the Western Kenya County Governments.
- ii. To determine the contribution of mechanisms for reporting fraud toward minimizing the severity and improved reporting of fraud cases among the Western Kenya County Governments.
- iii. To assess the role zero-tolerance to fraud policies play with regard to reducing the severity and improved reporting of fraud cases among the Western Kenya County Governments.

### **1.4 Research Question**

The study is intended to answer the following research questions:

- i. What is the effect of fraud control plans on mitigating the severity and improved reporting of fraud cases among the Western Kenya County Governments?
- ii. What is the effect of the mechanism for reporting fraud toward minimizing the severity and improved reporting of fraud cases among the Western Kenya County Governments?
- iii. What is the effect of the zero tolerance to fraud policies with regard to reducing the severity and improved reporting of fraud cases among the Western Kenya County Governments?

## **1.5 The Scope of the Study**

This study sought to establish the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector: The case of County Governments in Western Kenya. The conceptual scope covered fraud management practices in these counties. This study was therefore valuable to the county governments in Kenya and would thus allow them to mitigate the severity and reporting of fraud cases in the public sector. In terms of the geographical scope that was covered, the study specialized in 11 county governments in the Western Kenya region. The Accountants, Internal and External Auditors, and Forensic Investigators were the participants in the study due to their understanding of fraud management policies and since they action public policies touching on monetary problems within the counties. Respondents were drawn at random from the Auditor General's Office and included forensic investigators attached to the county governments under study. The study was conducted between May 2022 and June 2022 and was limited to a quantitative research approach. The study was underpinned by the fraud triangle theory and deterrence theory.

## **1.6 The Significance of the Study**

The application of fraud management policies in mitigating the severity and reporting of fraud cases raises various areas for future research, however, this study centered on assessing the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector: The case of County Governments in Western Kenya. Policymakers and the government, researchers, scholars, and the county governments among other stakeholders were identified as the main beneficiaries of this study.

### **1.6.1 Policymakers and the Government**

The study's findings will aid the Kenyan government and policymakers in developing a legal framework to combat fraud based on the recommendations established by the study.

### **1.6.2 Researchers and Scholars.**

The study's findings are valuable to future researchers, scholars, and academicians who want to conduct research on the effectiveness of fraud management policies on fraud hindrance and

detection within the devolved units or Kenyan county governments. Moreover, the study contributes to future literature and fills the current research gap.

### **1.6.3 County Governments.**

The study's findings may aid in identifying gaps for fraud mitigation within Kenya's county governments. The findings of the study would also benefit the Management team and those in charge of internal forensic audits in County Governments by allowing them to implement and streamline the best fraud management policies.

## **1.7 Chapter summary**

This chapter presented the introduction of the study, which is divided into six sections. Section 1.1 discussed the background of the study which included a critical examination of the independent and dependent variables and their selection is justified; Section 1.2 conducted a critical examination of the statement of the problem, which stated clearly why this study should be carried out; Section 1.3 presented the objectives of the study, which included both the general objective and specific objectives; Section 1.4 presented the research questions; Section 1.5 presented the scope of the study and finally, Section 1.6 presented the significance of the study, which included how the study will help various stakeholders.



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The chapter includes relevant theoretical models used for the study as well as the empirical literature on fraud management policies in mitigating the severity and reporting of fraud cases. Further, it captures some of the existing literature on fraud management policies in mitigating the severity and reporting of fraud cases, as well as why it is necessary for organizations to implement fraud management policies based on past studies. The chapter compares the similarities and differences in the findings of assorted studies carried out in numerous sectors and geographical locations to work out the role of fraud management policies in mitigating the severity and reporting of fraud cases. Additionally, it includes narrowing the information gap. Lastly, the chapter uses the existing literature to give a summary of how fraud management policies ought to be implemented.

### **2.2 Theoretical Framework**

This section provides a theoretical overview of fraud management policies in mitigating the severity and reporting of fraud cases. In this study, a multi-theoretical approach was used because it provides a more comprehensive understanding of a phenomenon. This argument is supported by empirical papers that have been published in leading repositories. The fraud triangle and deterrence theories influence the research.

#### **2.2.1 The Fraud Triangle Theory**

This theory was created by (Cressey, 1953). In the year 1950, a criminologist undertook research with an aim to identify the drive within individuals who engage in fraudulent activities. He examined 250 criminals in 5 months (Abdullahi & Mansor, 2018). According to Cressey's (1953) findings, fraud is committed for 3 major reasons: pressure, opportunity, and rationalization. As a result, the fraud triangle theory emerged.

Based on the pressure as an element for committing fraud, Albrecht et al. (2018) emphasized the importance of using the phrase "perceived" when discussing pressure or opportunity to commit fraud because the pressure or opportunity may not be real and is solely dependent on the perpetrator's perceptions. According to Lister (2021), the essential aspect of committing fraud is pressure or incentive. He talked about three types of pressure: personal, work-related stress, and external pressures. Vona (2019) investigates various personal and corporate pressure as key motivational proxies for fraud. Greed, living beyond one's means, excessive expenses or personal debt, family financial problems, and drug addiction are all examples of pressure. When pressure turns into an obsession with achieving corporate goals regardless of the repercussions, the situation becomes unstable and eventually leads to catastrophe. Individuals are more prone to participate in dubious behaviors in this situation, which may lead to fraud (Hooper & Pornelli, 2010)

The opportunity, according to Rae et al. (2017), is a flaw in the system that the employee has the opportunity, power, and capacity to exploit and possibly conduct fraud. The weaker an organization's internal control system is, the more likely it is that the fraud was hidden. Financial fraud may not occur even when an employee is under a lot of strain, according to Hooper and Pornelli (2010), unless there is an opportunity. Individuals are heavily influenced to commit fraud by organizational internal control flaws, a bad auditing system, a lack of accounting records, and a lack of segregation of duties. Tunerj et al. (2019) suggest that even if a person is under pressure or has a motive, he will not be able to commit fraud unless the opportunities are presented. Related party transactions, according to Moyes et al. (2005), would be the second factor among the multiple opportunity risk variables. According to Wilks and Zimbelman (2020), related party transactions can only be ranked third among the several elements that indicate the presence of fraud opportunities.

The third aspect of the fraud triangle hypothesis, as well as the fraud diamond theory, is rationalization. This concept states that when conducting fraud, a fraudster must express a variety of ethically acceptable behaviors that was used to justify his plan before breaking the trust. The perpetrator's opinion that the dishonest and unethical action is something other than illegal activity is referred to as rationalization. If the offender is unable to rationalize his unethical behavior, he is unlikely to commit fraud. "I was only borrowing the money," "I was entitled to the money," "I had to steal to provide for my family," "I was underpaid/my employer had cheated me," are some of the moral justifications used by fraudsters (Cressey, 1953). It's

also worth noting that observing rationalization is tough; as a result, it's hard to read the minds of con artists (Cressey, 1953; Wells, 2005). Fraudsters frequently have specific attitudes that allow them to justify their dishonest behavior (Hooper & Pornelli, 2010). Incentives/pressure, opportunity, rationalization, and capability are all interconnected. According to Howe and Malgwi (2019), the established gap between incentive/pressure and opportunity is closed when the fraudster can justify his unethical behavior.

The fraud triangle theory has been chosen over fraud diamond or pentagon since it clearly informs the study and its variables since the respondents in the study especially accountants can commit fraud and at times may be under financial pressure and can rationalize processes. Since the respondents in this study are the executors and policy implementers within the county governments, they may in their own interests choose to implement the internal control systems or even ignore the policies laid down. The theory, therefore, supports the usefulness of examining fraud management policies in mitigating the severity and reporting of fraud cases.

### **2.2.2 Deterrence Theory**

The origins of deterrence theory can be traced back to the writings of the 18<sup>th</sup>-century philosophers Jeremy Bentham (1948) and Beccaria Cesare (1963), who argued that humans were self-interested and rational thinkers, driven in their actions by an economic 'hedonistic calculus' in which they act to maxim (Paternoster & Raymond, 2010; Tombs et al., 2013). This theoretically opens a Pandora's Box of 'deterrence,' whereby raising the costs of behavior through sanctions reduces the willingness to pursue a bad course of action, but fraud remains an enemy of the public service. Individuals' fear of punishment, according to this theory, has a negative impact on their intent to commit fraud (Nagin et al., 2011). Deterrence is useful in public entities for controlling employee behavior, particularly in the fight against fraud. Deterrence is widely regarded as the most effective method of combating fraud. As a result, there is an urgent need to develop strategies to prevent individuals from acting fraudulently. It is self-evident that prevention is preferable to cure, and that hiring a forensic accountant is the only way to combat fraud (Nagin et al., 2011).

As governments around the world recognize the importance of counteracting employees' fraudulent actions and the potential risks they may pose, deterrence theory has become increasingly important, and forensic accountants can play an important role in the deterrence of fraud (D'Arcy et al., 2011). D'Arcy et al. (2011) discovered that detecting and punishing

fraud perpetrators, as well as raising awareness and providing clear information on repercussions if one is a perpetrator, reduced the amount of fraud. According to this theory, the harsher the punishment and the harsher the sanctions, the better the employees behave, which is the key remedy in fraud control (Herath et al., 2009). Deterrence techniques force people to consider the possibility of being caught as well as the consequences of their actions before deciding whether to break the rules (D'Arcy et al., 2009).

One of the most difficult challenges in determining whether deterrence methods have been effective in fraud control is that the results are difficult to evaluate and monitor (Herath et al., 2009). Even with the help of forensic accountants, monitoring employees can be very expensive and complicated. Continuous checks by forensic accountants, for example, may instill fear in employees, especially if they are aware that their actions are being monitored, owing to the complexity and profound differences in their organizations and the methods of control put in place (D'Arcy et al., 2009). Regardless of the issues with monitoring the outcomes, deterrence theory is widely used in organizations to prevent and detect fraud (Herath et al., 2009). Overall, deterrence is still considered the most powerful theory in fraud detection and prevention.

Deterrence theory is relevant to the study since it was used to predict employee behaviors in various situations because behavior is either supportive or disruptive of fraud control (D'Arcy et al., 2011). The reason for this is that fraud occurs because of employees failing to follow financial control policies by using their designations for personal gain (Herath et al., 2009). As a result, deterrence theory is one of the most applied theories in fraud management policy (Siponen et al., 2010). Fraud deterrence theory informs the study and its variables because fraud does not happen at random; it happens when there are right factors for its occurrence. The enablers of fraud are the root causes and enablers of fraud deterrence outbreaks. It was critical to identify potential fraud opportunities and how fraud management policies could eliminate factors that cause fraud. Whereas preventing fraud encompasses both short- and long-term actions, it is possible that it is not the same as fraud detection, which has frequently been a source of confusion. Fraud detection entails examining old transactions for signs of unusual transactions. To Deter fraud, an assessment of the conditions and behaviors that fosters fraud, as well as what is likely to happen when anti-fraud measures are not put in place such as the use of fraud management policies, could be implemented.

## **2.3 The Empirical Review**

This section of the study provides a critical examination of the empirical literature on fraud management policies in mitigating the severity and reporting of fraud cases. Further, it goes ahead to demonstrate the identified research gaps discovered during the critical review of the literature.

To reduce the probability of fraudulent activities from taking place and mitigation of financial losses, businesses should adopt fraud detection and prevention strategies that are sufficient to combat fraud (Bierstaker et al., 2006). When it comes to fraud prevention, the use of regulations and policies is pivotal (Bolton & Hand, 2002). Since detecting fraud follows when preventing fraud has failed, it entails identifying a previously committed action (Bolton & Hand, 2002). Research methods that will assist investigators in preventing and detecting potential fraud should therefore be adopted.

Varied perception-based research studies are conducted to work out the usefulness of fraud management policies within the private and public sectors (Sang, 2017; Kiragu et al., 2015; Njanike et al. 2009; Amanze & Onukwugha, 2017; Olay & Dada, 2017). The studies have resulted in policy recommendation frameworks outlining the best policies for mitigating the severity and reporting of fraud cases in the public and private sectors. Because of the sensitivity of the issue and the fear of reputational damage, obtaining secondary data for the purpose of assessing an entity's efficiency of anti-fraud strategies is a challenge to the researcher. Furthermore, because of the significant differences in both economic and geographical environments where most of these studies were conducted, making the generalization of those findings in Kenya would be misleading. As a result of this, knowledge and literature gaps existed. As a result, a study is needed to determine the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector.

### **2.3.1 The role of a fraud control plan in mitigating the severity and improved reporting of fraud cases**

Alam (2010) asserts that there are three ways to prevent crime: pre-emptive, preventive, and repressive. When repression has been used to commit a crime, repressive measures are imposed. whereas pre-emptive and preventive measures focus on preventing crimes from

happening in the first place. The best approaches to take when combating fraud are ones that are either preventive or preemptive rather than repressive. Preventive actions should be prioritized above repressive ones for a number of reasons (BPKP, 2015): when corruption occurs, there is a significant financial loss; the amount of stolen state funds that are recovered is very small; the reputations of both individuals and institutions are harmed; the legal system and potential suspects must invest time and money in the litigation process; and the longer the corruption case is kept secret, the greater the chance that the corruptors will use other fraud to conceal their actions. The construction of a program that is effective at preventing and detecting fraud, one of which is through the implementation of the Fraud Control Plan (FCP), is one of the preventive measures that public agencies can use to prevent fraud. A responsible strategy or process that is created with the goal of effectively preventing fraud in an organization is known as a "fraud control plan" (KPK, 2014).

Studies like Kiragu et al. (2015) and Sang (2017) investigated the factors that affect fraud management practices in Kenyan commercial banks as well as bank size and occupational fraud risk. Both investigations used correlation and regression analytic techniques, as well as a survey research design. They discovered a strong and positive correlation between bank size and fraud control plans. Their findings also showed that the number of fraudulent operations in the banking sector had increased due to a lack of comprehensive fraud management policies and non-compliance with fraud mitigation techniques. The study focused on the factors that affect fraud management policies in Kenyan commercial banks in contrast to the current study, which sought to investigate the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector. This, therefore, presents a conceptual gap.

Khanna and Arora (2019) examined the reasons for bank fraud and the implementation of preventive security controls in the Indian banking industry. In particular, the study evaluated the effectiveness of fraud control plans, ratio analysis, trend analysis, and commercial anti-fraud strategies in mitigating the severity and reporting of fraud in the banking industry. The implementation of fraud management policies considerably improved the severity and reporting of fraud cases in the banking industry, as determined by descriptive statistics and the Ordinary Least Square (OLS) model. Further, the study empirically discovered that the major causes of bank frauds were a lack of training, overworked staff, and low compliance levels. The study concentrated on firms listed in the banking sector, as opposed to the current study which sought to investigate the role of fraud management policies in mitigating the severity

and reporting of fraud cases in the public sector. This, therefore, presents a location contextual gap.

### **2.3.2 Contribution of Mechanism for reporting fraud towards minimizing the severity and improved reporting of fraud cases**

Fraud can take numerous forms and occur in a variety of circumstances. There is no one-size-fits-all approach towards minimizing the severity of fraud, and the key to success is the establishment and improvement of a fraud reporting mechanism. The National Fraud Authority (NFA) estimates that the public sector in the United Kingdom has lost £17.6 billion in fraud, with a total loss of £30 billion a year for the country as a whole, comprising both public and private sectors (NFA, 2010). According to research conducted by the London Boroughs Fraud Investigators Group (LBFIG) in 2009, local government fraud totaled £621 million (Wesley Lane, 2010). According to this study by Wesley Lane, the public sector is responsible for more than half of all estimated losses in the United Kingdom.

Fraud prevention is the responsibility of everyone in the company, from the CEO to the lowest-ranking executive. Strong controls are required to ensure that the perceived risk of fraud is reduced. As a result, proactive measures to detect fraud, such as a clear mechanism for reporting fraud, questioning, fraud assessment, and an anonymous hotline, give employees the responsibility and opportunity to help stop fraud. These measures will also boost the perception of detection, lowering the risk of fraud and preventing new frauds. It will contribute to the creation of a positive work environment that decreases the pressure or motivation to commit fraud while also improving employee morale and ethics (Peterson & Zikmund, 2004).

In Nigeria, Amanze and Onukwugha (2017) and Olay and Dada (2017) looked at the roles of auditors in the banking industry's loan fraud detection and prevention system. The results of these studies, which employed a survey research design, showed that the level of fraud control in Nigerian banks was low; they also showed that the mechanisms for reporting fraud, system audits, and financial report verifications adopted by the banking industry were unable to stop fraudulent activities among Nigerian banks. The establishment of a multi-agent framework from regulatory authority is a stand-alone system that can be integrated by banks to combat loan fraud, according to their studies, which also showed that audit roles captured by mechanism for reporting fraud, system audit, and financial report verification were not

statistically significant in determining the fraudulent act in the Nigerian banking industry. The scope of the study is limited to Nigeria, as opposed to this study which is limited to Kenyan County governments. This, therefore, presents a location contextual gap.

Adetoso and Akinselure (2016) studied fraud prevention and control in the banking sector of Nigeria. Internal audit and whistleblowing were utilized as stand-ins for fraud prevention, while management control was used as a stand-in for fraud control. Because its proxies, such as the mechanism for reporting fraud, internal audit, and whistleblowing, were taken into consideration, the study demonstrates that there was a substantial association between fraud control and fraud prevention. The study also showed that, based on the sample study, fraud management strategies must be able to increase fraud control and fraud prevention of commercial banks since the proxies for both variables significantly influence one another. The study focused only fraud prevention and control in the banking sector, as opposed to the current study which sought to determine how the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector; the case of county governments in Western Kenya thus presenting a conceptual gap.

### **2.3.3 The role of Zero tolerance to fraud policies with regard to reducing the severity and improved reporting of fraud cases**

According to Khadra and Delen (2020), all organizations, public or private, are susceptible to fraud. The impact of fraud on states, organizations, and citizens is the same: it undermines the rule of law, violates rights, lacks transparency, wastes public resources, and undermines national integrity. As a result, fraud and its consequences have become a global problem (Khadra & Delen, 2020). Fraud against the organization is typically committed for the direct or indirect benefit of employees, individuals outside the organization, or another organization (Erbuga, 2020b). Accepting bribes or gifts; diverting a potentially lucrative transaction to an employee or person outside the organization that would otherwise generate profit for the organization, and so on are examples of fraud.

Fraud is not an individual problem; rather we face systematic fraud, particularly in the public sector, because of the establishment of a private monopoly over the public sector. Therefore, the first step that needs to be implemented in an organization to develop an efficient fraud control system is the development of an anti-fraud strategy. The anti-fraud strategy is based on



a policy of integrity and zero tolerance for fraud. Corruption, embezzlement of assets, and misrepresentation are examples of fraud. There are scammers inside and outside the organization. The following factors affect fraud performance: Pressure, Opportunity, and Rationalization. The cost of fraud can be difficult to estimate. In the context of the Kenyan County Governments, a political will, effective legislation, anti-fraud culture, strategy, and a policy of zero tolerance for fraud all play a role in fighting fraud.

Enofe et al. (2017) conducted an empirical analysis of bank fraud in Nigeria and preventive strategies. The study's purpose was met by taking into account the zero-tolerance fraud policy, the Internal Control System (ICS), Corporate Governance (CG), and Compliance with Banking Ethic (CBE). Regression and correlation analysis were used to assess the strength of the relationship between bank fraud and preventive measures. According to the study, a zero tolerance for fraud policy, a robust internal control system, sound corporate governance, and adherence to banking ethics all significantly and favorably affect the prevention of fraud in the banking sector. The study only investigated how compliance policies, management overrides for controls and segregation of duties affected fraud mitigation. These techniques are a limited indicator of fraud mitigation. The study therefore presents a contextual gap.

Karuti (2020) examined forensic accounting and fraud control in county governments within Mt. Kenya region. The aim of the study was to investigate and produce definitive results on how fraud management policies, fraud management policies, degree of forensic accounting knowledge, and application of forensic accounting skills affected fraud control in the County Government of Kenya. Inferential statistics from regression analysis include tests for normality, multicollinearity, model fitness, model specification, and a test of a hypothesis with a 95% confidence level. The study found that county government personnel did not sufficiently apply fraud management policies to counter the potential of fraud. The study also found a favorable and significant correlation between fraud management policies and fraud control. Since the study used parametric analysis on non-parametric data, it presents a methodological gap.

Alfian et al. (2017) examined the effect of antifraud strategy on fraud prevention in the banking industry. This study aimed to investigate the impact of an anti-fraud strategy including a policy of zero tolerance to fraud-on-fraud prevention in the banking sector. Quantitative methods, particularly explanatory research approaches, were used to assess the research data. The results of this study demonstrated that the three pillars of prevention, detection, and investigation all

have an impact on preventing fraud in the banking industry. This study has a geographic gap because it focused on private sector companies in developed economies, whose anti-fraud tactics may be superior to those used locally. The study did not demonstrate how fraud management policies as the antifraud strategy can aid in mitigating severity in fraud cases thus presenting a conceptual gap.

## **2.4 The summary of Literature Review and Research Gap**

In this chapter, a discussion of the fraud triangle theory and the deterrence theory, both of which were relevant to this study was done. It presented the studies that were carried out that were related to the objectives of this study. The similarities and differences based on previous research outcomes in the same subject area were ably presented through the elaborate empirical review. The techniques used in the previous studies were also presented. The chapter established that a restricted study was conducted within the context of Kenyan County governments to see the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector. At its best, fraud in the county governments has been regarded by the office of the auditor general as a serious threat to the counties. Generally, fraud has been associated with the rise of economic crime and alarming regulatory flaws. This problem has been on a sharp rise in developing countries and economies, Kenya included (PwC Global Economic Crime Survey 2016).

Most of the studies reviewed (Sang, 2017; Kiragu et al., 2015; Njanike et al. 2009; Amanze & Onukwugha, 2017; Olay & Dada, 2017) used a descriptive research design and adopted the survey methodology. The Primary data for the studies were gathered from various participants and were then quantified to assess their effectiveness in the study by use of the Likert scale. To measure and classify the level of fraud hindrance and detection strategies, the studies used descriptive statistics such as mean, mode, median, standard deviation, and ranking techniques. Sengur (2012), on the other hand, used Friedman's test model to determine whether there was a significant variation in auditors' perceptions of the effectiveness of fraud management policies in mitigating corruption, asset misappropriation, and financial statement fraud.

**Table 2. 1: Key Studies and Research Gaps**

The Key studies, the Research Gaps, and how the Research Gaps were filled by the study are summarized in the table below:

<b>Author</b>	<b>Title</b>	<b>Findings</b>	<b>Research Gap and how the study will fill them.</b>
Kiragu et al. (2015)	Bank size and occupational fraud risk: Empirical evidence from commercial banks in Kenya.	They discovered a strong and positive correlation between bank size and fraud control plans. Their findings also showed that the number of fraudulent operations in the banking sector had increased due to a lack of comprehensive fraud management policies and non-compliance with fraud mitigation techniques.	The study focused on the factors that affect fraud management policies in Kenyan commercial banks in contrast to the current study, which sought to investigate the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector. This, therefore, presents a conceptual gap.
Khanna and Arora (2019)	Reasons for bank fraud and the implementation of preventive security controls in the Indian banking industry	The implementation of fraud management policies considerably improved the severity and reporting of fraud cases in the banking industry, as determined by descriptive statistics and the Ordinary Least Square (OLS) model	The study concentrated on firms listed in the banking sector, as opposed to the current study which sought to investigate the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector. This, therefore, presents a location contextual gap.

<b>Author</b>	<b>Title</b>	<b>Findings</b>	<b>Research Gap and how the study will fill them.</b>
Amanze and Onukwugha (2017)	Loan fraud detection system for banking industries in Nigeria. Using data mining and intelligent agents: The	The establishment of a multi-agent framework from regulatory authority is a stand-alone system that can be integrated by banks to combat loan fraud, according to their studies, which also showed that audit roles captured by mechanism for reporting fraud, system audit, and financial report verification were not statistically significant in determining the fraudulent act in the Nigerian banking industry	The scope of the study is limited to Nigeria, as opposed to this study which is limited to Kenyan County governments. This, therefore, presents a location contextual gap.
Adetoso and Akinselure (2016)	Fraud prevention and control in the banking sector of Nigeria	The study demonstrates that there was a substantial association between fraud control and fraud prevention. The study also showed that, based on the sample study, fraud management strategies must be able to increase fraud control and fraud prevention of commercial banks since the proxies for both variables	The study focused only fraud prevention and control in the banking sector, as opposed to the current study which sought to determine how the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector; the case of county governments in Western Kenya thus

Author	Title	Findings	Research Gap and how the study will fill them.
		significantly influence one another	presenting a conceptual gap.
Enofe et al. (2017)	Empirical analysis of bank fraud in Nigeria and preventive strategies	According to the study, a zero tolerance for fraud policy, a robust internal control system, sound corporate governance, and adherence to banking ethics all significantly and favorably affect the prevention of fraud in the banking sector	The study only investigated how compliance policies, management overrides for controls and segregation of duties affected fraud mitigation. These techniques are a limited indicator of fraud mitigation. The study therefore presents a contextual gap.
Opiyo (2017)	Role of forensic accounting services in fraud mitigation among parastatals in Kenya	According to the study's findings, parastatals in Kenya include compliance policies, management overrides for controls, and segregation of duties, all of which significantly aid in reducing fraud.	The study only investigated how compliance policies, management overrides for controls and segregation of duties affected fraud mitigation. These techniques are a limited indicator of fraud mitigation. The study therefore presents a contextual gap.
Karuti (2020)	Forensic accounting and fraud control in county	The study found that county government personnel did not sufficiently apply forensic	Since the study used parametric analysis on non-parametric data, it

Author	Title	Findings	Research Gap and how the study will fill them.
	governments within Mt. Kenya region	accounting rules to counter the potential of fraud. The study also found a favorable and significant correlation between forensic accounting skills and fraud control.	presents a methodological gap.
Alfian et al. (2017)	Effect of antifraud strategy on fraud prevention in the banking industry	The results of this study demonstrated that the three pillars of prevention, detection, and investigation all have an impact on preventing fraud in the banking industry	The study did not demonstrate how fraud management policies as the antifraud strategy can aid in mitigating severity in fraud cases thus presenting a conceptual gap.

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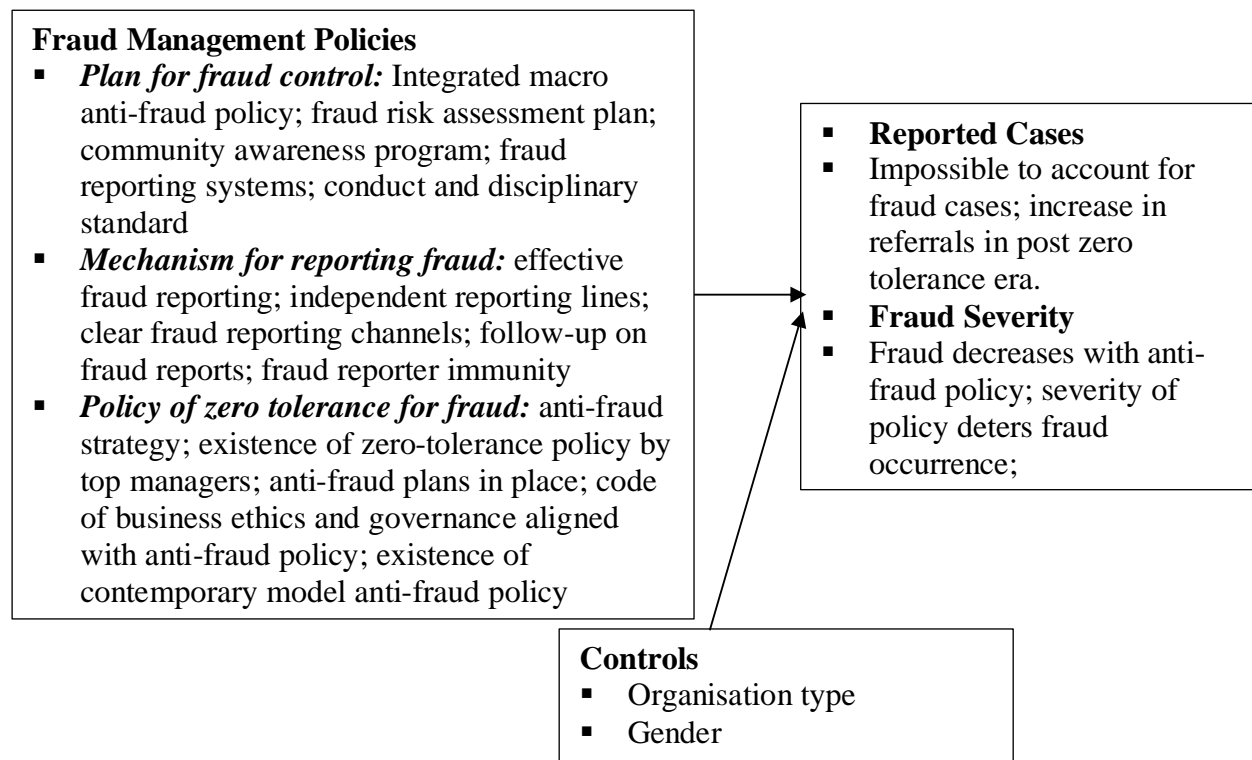
**Source: Researcher (2022)**

## 2.5 Conceptual Framework

A conceptual framework helps a study by identifying the research variables and clarifying their relationship (McGaghie et al., 2001). The fraud triangle and the deterrence theories were used to develop the conceptual framework for the study. These theories championed the case for the use of the dimensions for the independent and dependent variables to measure the relationship between fraud management policies and fraud severity and reported cases. As a result, fraud management policies become the study's independent variable. The effect of the independent variable dimensions was evaluated. Fraud severity and reported cases, therefore, become the dependent variable. This relationship is depicted in figure 2.1

## Independent Variables

## Dependent Variable



**Figure 2. 1: Conceptual Framework**

## 2.6 Operationalization of Variables.

Operationalization facilitates the transformation of abstract concepts into observable characteristics that can be measured using indicators. Both the dependent and independent variables were measured using a rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). The indicators used in the studies are summarized in table 2.2.

**Table 2. 2: Operationalization of Variables.**

Variable	Constructs	Definition of Operation	Measures for rating	Data Analysis	Supporting Literature
<b>Independent Variable:</b> Fraud Management Policies	Fraud Control Plans	The ability of the organization to institute and implement the construct.	A five-point Likert scale on the implementation level and the believed usefulness	Descriptive analysis, inferential analysis	Kiragu et al. (2015)

Variable	Constructs	Definition of Operation	Measures for rating	Data Analysis	Supporting Literature
	Mechanism for reporting fraud	The degree to which this construct is used in the Organization	A five-point Likert scale on the implementation level and the believed usefulness	Descriptive analysis and inferential analysis	Amanze and Onukwugha (2017)
	Policy of Zero Tolerance for fraud	The extent to which this construct is applied in the organization	A five-point Likert scale on the implementation level and the believed usefulness	Descriptive analysis and inferential analysis	Alfian et al. (2017)
<b>Dependent Variable:</b> Fraud Severity and reported cases	Number of reported cases of simple and complex fraud	The degree to which the organizations are reporting low cases of simple and complex fraud	A five-point Likert scale on the implementation level and the believed usefulness	Descriptive analysis and inferential analysis	Ocansey (2017)
<b>Control variables</b>					
Organization type	Type of the organization the respondent works for		=1 if it is a county government, 2 if it is the office of the auditor general	Descriptive analysis , Regression analysis	
Gender	Gender of the respondent		=1 if it is male, 2 if it is female	Descriptive analysis , Regression analysis	

**Source: Researcher (2022)**



## **2.7 Chapter Summary**

The study's literature review was described in this chapter. From the onset, the chapter began by describing the two theories that underpinned the study: the fraud triangle theory, and the deterrence theory. The empirical studies on the relationship between fraud management policies and fraud severity and reported cases were then discussed in detail followed by the presentation of the study's conceptual framework illustrating the nature of the relationship between fraud management policies and fraud severity and reported cases as per the literature review. The chapter ends with the operationalization of both independent and dependent variables for measurement in the questionnaire.

## **CHAPTER THREE: RESEARCH METHODOLOGY.**

### **3.1 Introduction**

The study's third chapter was utilized to chronologically outline the methodology that was followed throughout the study. A summary of the research philosophy, design, population, sampling method, data collection tools, data analysis, and presentation were also included in this section.

### **3.2 Research Philosophy.**

A system of rules and beliefs regarding the development of knowledge and its fundamentals is known as philosophy (Saunders et al., 2014). This study's foundation is congruent with empirical positivism, an objective epistemological strategy that enables the researcher to objectively examine theories and theoretical notions (Bell et al., 2018). This philosophy was chosen for the study because it is grounded in empirical positivism and is done in an impartial manner without the influence of the researcher or the subjects. Additionally, the philosophy was appropriate for this study because its main objective was to estimate the relationship between the study variables using quantitative methods. As a result, the paradigm was determined by the study to be the most successful in conducting the survey.

### **3.3 Research Design**

Research design is the model that enables the researcher to find solutions to problems and guidelines at different stages of research (McLaughlin, 2012). The research design provides a framework for the research to be carried out. A quantitative research design was utilized in the study. An appropriate research design is necessary to empirically test the structural linkages predicted by the conceptual model of the study. By using data from questionnaires, the researcher hoped to improve the answer to the research questions (Creswell, 2013). To answer the study's research questions, the researcher collected quantitative data. A descriptive design was used for the study. Descriptive designs enable the collection, summarization, presentation, and interpretation of information for the purpose of clarification. It also involves many people and describes population characteristics using an unbiased sample. Because it depicts accurate current facts through data collection for testing hypotheses or answering questions to conclude

the study, the descriptive research design is one of the best methods for conducting research in human contexts (Creswell, 2014). The study used a field survey and a descriptive research design. With the help of this research design, the researcher was able to collect empirical data on both independent and dependent variables simultaneously. The researcher was also able to describe the relationships between the variables thanks to this research design.

### 3.4 Target Population.

The term "target population" refers to a universal set of all members of a real or hypothetical set of people, events, or objects to which an investigator wishes to generalize the results (Bryman, 2012). A target population is a collection of people, things, or occurrences that share observable characteristics that the study is interested in (Gibson, 2017). Kenya has a total of 47 counties, according to the County Governments Act (2012). The study analyzed 11 County governments in the Western Kenya region as well as the office of the Auditor-General. Western Kenya County Governments were chosen because they are leading in Fraud occurrence according to the 2020 annual corporate report by the Office of the Auditor-General (OAG, 2020). This formed the study's unit of analysis. A target of an investigation is referred to as a unit of analysis and might include, among others, an individual, a group of individuals, an organization, or a country (Bryman, 2012). The unit of analysis for the current study was the accountants, internal auditors, external auditors and forensic investigators. This is because accountants and auditors, both internal and external, oversee the implementation of the accounting and the fraud management policies used by the counties to fight fraud. The study's findings, while establishing the body in which the respondents were deployed, are shown in Table 3.1.

**Table 3. 1: Target Population**

	<b>Frequency</b>	<b>Percent</b>
11 Western Kenya Region County Governments	405	90.00
The Office of Auditor General	46	10.00
<b>Total</b>	<b>451</b>	<b>100</b>

**Source: Kenya Census results (2019)**

The study also discovered that a delicate balance of respondents was achieved, with approximately 405 respondents representing approximately 90 percent drawn from Kenya's County Governments and approximately 46 respondents representing approximately 10 percent drawn from the Auditor General's office at the National Audit Office. The sample respondents for the study were 405 internal and external auditors and certified public accountants attached to the counties and 46 forensic investigators from the office of the OAG.

### **3.5 Sampling Procedure and Sample Size.**

Sampling is a process, procedure, or technique for selecting a subset of a population to participate in a study. It is the process of selecting a group of people for a study so that the people selected to represent the large group from which they were selected (Kothari, 2008). Bernard (2013) for his part, defines a sample as a small proportion of the total population, a selection from the population. The sample was selected using a stratified random sampling method. The stratified proportional random sample provides more accurate estimates of general population parameters and ensures that a more representative sample is drawn from a relatively homogeneous population. Stratification attempts to reduce the standard error by allowing some control over the variance (Latham, 2007). Divided into three groups in the study: Internal Audit, Accounting and External Audit staff from the County governments and Accounting, and Forensic Investigation staff from the Office of the Auditor-General respectively. The study took a sample of at least 30% from each shift apart from the Forensic Investigation staff. According to Mugenda (2008), 10% of the population must be sampled for a population of 1000 or more, while 30% of the population must be sampled for a population of less than 1000. As a result, the sample size was 451 staff members.

#### **3.5.1 The sample and the respondents.**

The study established that the sample was chosen, and the respondents were as shown in table 3.2.

**Table 3. 2: Sample Size**

<b>Job Occupation</b>	<b>Frequency</b>	<b>Percent</b>
The Internal Auditors	135	30
The Forensic Investigators	46	10

<b>Job Occupation</b>	<b>Frequency</b>	<b>Percent</b>
The External Auditors	135	30
The Counties CPAs	135	30
<b>Total</b>	<b>451</b>	<b>100</b>

**Source: Kenya Census results (2019)**

### **3.6 Data Collection Techniques and Procedure**

For the study survey, a questionnaire instrument was constructed. In descriptive and explanatory investigations, questionnaires are frequently used to collect information from respondents about a certain topic (Saunders et al., 2014). The process of creating a tool (research questionnaire) with a set of prepared question items that aim to elicit replies in a systematic way is known as questionnaire development (Christensen et al., 2011). With the use of closed-ended questions and 5-point Likert scale systems, the research instrument acquired a structured format. The construction of the study questionnaire was influenced by earlier research and the constructs used to measure the study variables. As a result, the statements were in line with the study's objectives.

The questionnaire was divided into four sections: Section A gathered information on the demographic profile of the respondents in the study. Sections B and C were structured to address the study's independent and dependent variables dimensions, that's a plan for fraud control, a mechanism for reporting fraud, a policy of zero tolerance for fraud, and the reduction in the reported cases of simple and complex fraud. A five-point Likert scale was used to rate the questions for their efficacy (strongly agree - 5, agree - 4, neutral - 3, disagree - 2, and strongly disagree - 1).

### **3.7 Data collection procedures**

All respondents received the questionnaires using a drop and pick later procedure (Fowler Jr, 2013). As per the study's sample, each respondent was contacted separately. The distribution of the questionnaires that were given to the respondents was tracked using a register that was kept. The researcher saw to it that the required permissions were obtained so that data collecting could take place. Additionally, the researcher used Google forms to gather data electronically

when the drop and pick approach could not be used, which improved the convenience of the data collecting process.

### 3.8 Research Quality

This is a reference to a small-scale replication and trial of a significant study that aids in evaluating the reliability and validity of the research instruments that will be used, as well as practical issues related to the administration of questionnaires (Bhattacharjee, 2012). A pilot test is required to identify various flaws that are more likely to occur, deficiencies in the study, as well as various difficulties that are most likely to arise during the research process (Creswell, 2014). A pilot test was conducted with several randomly chosen county governments. In this study, 10% of the sample made up the pilot group.

#### 3.8.1 Reliability test.

The degree to which a research instrument delivers consistent results after repeated trials is considered a reliability test (Cooper et al., 2014). Cronbach's alpha was employed in this study to determine the questionnaire's internal consistency. Legitimacy and consistency of findings on instruments contribute to important data interpretations (Creswell, 2013). A greater value indicates that the data items examined have a strong association, whilst a lower value indicates that the items tested have a weaker relationship. Cronbach's alpha was employed in this study to determine consistency in the range of 0 to 1. Closer values to 1 indicate that the variables under investigation are easily quantifiable. If the alpha is between 0.7 and 0.99, the reliability item can be accepted (Fraenkel & Wallen, 1996). The study conducted pilot tests among the 11 county governments and the office of the auditor general, which allowed for reliability statistics to be conducted. Table 3.3 shows the reliability test results.

**Table 3. 3: Reliability test results**

S.No.	Construct	N	Cronbach's Alpha	Items	Verdict
1	Fraud severity and reported cases	12	.934	4	<b>Accepted</b>
2	Plan for fraud control	12	.778	5	<b>Accepted</b>
3	Mechanism for reporting fraud	12	.825	5	<b>Accepted</b>
4	Policy of zero tolerance for fraud	12	.720	5	<b>Accepted</b>

**Source: Research data, (2022)**

The tests yielded Cronbach alpha scores of above 0.7, which led to the acceptance of the study questionnaire.

### **3.8.2 Validity test**

The content validity index for each instrument was calculated using two sets of data from each instrument. Validity was determined by giving two experts to evaluate the relevance of each item in the instrument to the objectives and rate each item on the scale of very relevant - 4, quite relevant - 3, somewhat relevant – 2, and not relevant – 1. Validity was determined using the content validity index (C.V.I),  $C.V.I = \text{items rated 3 or 4 by both experts} / \text{total number of items in the questionnaire}$ . This is symbolized as  $n^{3/4}/N$ . If the CVI computed for each tool was greater than 0.6, the instrument was considered valid as advised by (Jeffrey, 2011)

### **3.9 Data analysis and presentation**

The researcher made sure that all of the quantitative data were edited, coded, entered, and cleaned before the quantitative data could be evaluated. This guarantees accuracy and coherence. However, the researcher also used descriptive statistics and inferential statistics to evaluate quantitative data. SPSS version 22 was used to accomplish this. Descriptive statistics were employed to compile a summary of the demographic profile data. The descriptive statistics used in this study were percentages, means, standard deviations, and frequencies. The presentation of the study's findings included tables and figures. Bar and pie charts were among them. In order to evaluate the relationship between the categorical variables, the study also performed Spearman correlation analysis. In addition to component analysis, which was used to limit the number of variables and concentrate on just those that have the most influence, ordinal regression analysis was also performed. Ordinal logistic regression was relevant for the study since it was used to determine the strength of the relationship between independent variables (fraud management policies) and dependent variables (reported cases and fraud severity). The dependent variable in this study was assessed using a Likert scale with five possible values.

Based on the factor analysis, two factors for the dependent variable were extracted. These included Factor 1 - Deterrence effect of fraud management policies (Deterrence) and Factor 2:

Increased case reporting of fraud activities due to the existence of policy (Increased Case Reports). This, therefore, led to the development of two ordered logistic regression models for the study. With regard to the independent variables, the factor analysis results led to the extraction of four factors namely: Factor 1: Fraud reporting and disciplinary measures (FraudReport\_Discipline), Factor 2: Anti-fraud plan and zero tolerance to fraud (AntiFraudPlan\_ZeroTolerance), Factor 3: Independent fraud reporting system (IndependentFraudReportSystem) and Factor 4: Integrated macro-policy with clear responsibilities for fraud (IntegratedMacroPolicy). These formed the independent (test) variables for the study. Two control variables were also incorporated: gender of the respondents (whether male or female) and the type of organization the respondents worked in – whether county government or office of the auditor general. These variables were incorporated since the unit of analysis were the individual respondents to the questionnaire, being personnel affiliated to the county governments (280 respondents) or the office of auditor general (36 respondents). Based on this, the resultant ordinal logistic regression models utilized were as follows:

$$\begin{aligned} \text{Fraud\_Deterrence}_i = & \beta_1 \text{FraudReport\_Discipline}_i + \\ & \beta_2 \text{AntiFraudPlan\_ZeroTolerance}_i + \beta_3 \text{IndependentFraudReportSystem}_i + \\ & \beta_4 \text{IntegratedMacroPolicy}_i + \beta_5 \text{Gender}_i + \beta_6 \text{OrganizationType}_i + \\ & \varepsilon_i \end{aligned} \quad (1)$$

$$\begin{aligned} \text{IncreasedCaseReports}_i = & \beta_1 \text{FraudReport\_Discipline}_i + \\ & \beta_2 \text{AntiFraudPlan\_ZeroTolerance}_i + \beta_3 \text{IndependentFraudReportSystem}_i + \\ & \beta_4 \text{IntegratedMacroPolicy}_i + \beta_5 \text{Gender}_i + \beta_6 \text{OrganizationType}_i + \\ & \varepsilon_i \end{aligned} \quad (2)$$

Where: *Fraud\_Deterrence* represents deterrence effect of fraud management policies, *IncreasedCaseReports* represents increased case reporting of fraud activities due to existence of policy, *FraudReport\_Discipline* is fraud reporting and disciplinary measures, *AntiFraudPlan\_ZeroTolerance* reflects anti-fraud plan and zero tolerance to fraud, *IndependentFraudReportSystem* represents independent fraud reporting system, *IntegratedMacroPolicy* is integrated macro-policy with clear responsibilities for fraud, *Gender* represents the gender of the respondents and *OrganizationType* represents the type of organization the respondents worked in. Constants  $\beta_1 - \beta_6$  represent the coefficients for the independent variables and  $\varepsilon$  is the error term associated with any regression model. The regression models performed incorporate both disaggregated as well as aggregated models.



The probability ( $\pi$ ) for each outcome is contrasted with that of the reference outcome to provide the log odds ratio used as the estimator value.

Various diagnostic tests such as Cronbach alpha testing, sampling adequacy checks, measures of sphericity of data, multicollinearity, and the behaviour of covariates together with the factors using the scree plots were performed. The normality of the dependent variable was also checked prior to the analytical modelling.

### **3.10 Ethical Considerations**

Following receipt of a letter of ethical approval to conduct research from Strathmore Business School, and permission to conduct research from the National Commission for Science, Technology, and Innovation (NACOSTI), the researcher proceeded to write to all the targeted institutions and respondents, requesting permission to use the subjects as respondents in the study. Once permission was obtained, the researcher administered the questionnaire and conducted interviews with the respondents. Each questionnaire was accompanied by a covering letter that explained the purpose of the study to the prospective respondent. In each section of the respondents, a lead contact person was identified. The lead contact person reminded the respondents to complete the questionnaire and collect it on a regular basis. No personal information was obtained, ensuring the study's quality and integrity. To avoid plagiarism, all published and unpublished material was fully acknowledged.

## **CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS**

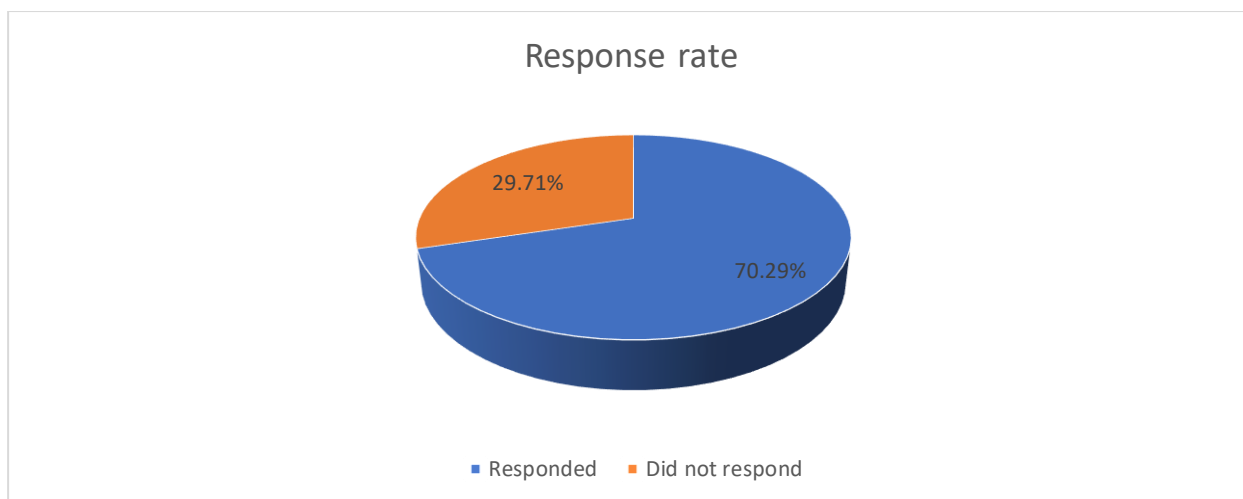
### **4.1 Introduction**

Results from the analysis of the data gathered in an effort to meet the study's objectives are presented in this chapter. The overall objective of this study was to determine the role of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector: The case of County Governments in Western Kenya. The results were provided in accordance with the study's goals. Tables and figures were used to make the conversations easier to understand. An inferential understanding of the relationship between the dependent variable—fraud severity and reported cases—and the independent variables—a plan for fraud control, a mechanism for reporting fraud, and a policy of zero tolerance for fraud—was presented using factor analysis, Spearman's rank correlation analysis, and ordinal logistic regression. These results, which came from the analyses, are shown.

### **4.2 Response rate**

The study aimed to get replies from 451 respondents, with 405 coming from the counties and 46 from the Office of the Auditor-General. To collect data on the current pandemic situation, the researcher used Google forms and physical questionnaires. The questionnaires were distributed between May 5th and June 14th, 2022. Only 322 of the 451 questionnaires were returned. Six questionnaires, however, contained insufficient information and were consequently excluded from the data analysis. As a consequence, 316 questionnaires with usable replies were produced, yielding a response rate of 70.07%. According to Saunders et al. (2007), a response rate of 30 to 40 percent was sufficient for analysis. According to Sekaran (2003), a response rate of 30% was satisfactory. According to Hager (2013), a response rate of 50% was adequate for analyzing and publishing the results. The response rate of 70.29% was therefore deemed sufficient for data analysis. Figure 4.1 illustrates the response rate for both google forms and physical questionnaires.

**Figure 4. 1: Research response rate**



Source: Research data, (2022)

#### 4.2.1 Demographic profile of the respondents

This section presented the demographic profile of the respondents in regard to, organizations, gender, job occupation, qualifications, professional certification, and the number of years of professional experience. This section is a presentation of the findings. While establishing the organizations in which the respondents were deployed, the study's findings were as displayed in table 4.1;

**Table 4. 1: Demographic characteristics**

Characteristics	Frequency	Percent
<b>Organizations</b>		
11 County Governments in Western Kenya Region	280	88.6
Office of the Auditor General (National & County)	36	11.4
<b>Total</b>	<b>316</b>	<b>100</b>
<b>Gender</b>		
Male	190	59.9
Female	126	40.1
<b>Total</b>	<b>316</b>	<b>100</b>
<b>Job Occupation</b>		
Forensic Investigators	36	11.4
Accountants	127	40.1
Internal Auditors	87	27.4
External Auditors	66	21.0
<b>Total</b>	<b>316</b>	<b>100</b>
<b>Qualifications</b>		

<b>Characteristics</b>	<b>Frequency</b>	<b>Percent</b>
Doctorate Degree	11	3.5
Masters Degree	87	27.4
Bachelors Degree	215	67.5
Diploma	5	1.6
Certificate	-	-
<b>Total</b>	<b>316</b>	<b>100</b>
<b>Professional certification</b>		
CFE	11	3.5
CFA	9	2.8
CPA	209	66.2
ACCA	83	26.1
Others	4	1.4
<b>Total</b>	<b>316</b>	<b>100</b>
<b>Years of professional experience</b>		
1-5	48	15.1
6-10	175	55.5
11-15	37	11.7
16-20	41	12.9
Over 20	15	4.7
<b>Total</b>	<b>316</b>	<b>100</b>

**Source: Research data, (2022)**

#### **4.2.1.1 Respondents' Organizations**

While establishing the organizations in which the respondents were deployed, the study's findings as displayed in table 4.1 shows that a good balance of respondents' organizations was established, with approximately 280 respondents representing about 88.6 percent coming from Western Kenya's County Governments, and about 36 respondents representing about 11.4 percent coming from the counties' Auditor General's offices.

#### **4.2.1.2 Gender of respondents**

The gender of the respondents was requested. In comparison to females, males made up the majority of responders (59.9%) as compared to females (40.1%). The findings show that there is a gender divide in both county government and the office of the auditor general's workforce, leading to the assumption that male workers dominate the 11 counties and the Office of the Auditor-General in the persons of Internal and External Auditors, Business Accountants, and Forensic Investigators.

#### **4.2.1.3 Job occupation of the respondents**

Table 4.1 presents data on the job occupation of the respondents from various institutions. The majority of the respondents (40.1%) were business accountants while 11.4% were forensic investigators. Only 27.4% of the respondents were internal auditors while 21.1% were external auditors. The results show that the accounts department has the highest number of employees in the 11 counties. Within the population sample that the researcher considered would provide the most accurate information, a fair distribution of responders was attained.

#### **4.2.1.4 Respondents' qualifications**

Respondents were asked to indicate their highest level of education. 3.5% of the respondents had doctorate degrees, while 27.4% were master's holders. Respondents with an undergraduate degree were 67.5% while only 1.6% of the respondents indicated a diploma as their highest level of education. None of the respondents indicated that they are holders of certificates. The results have shown that both the 11 counties and the Office of the auditor general have qualified employees working at those organizations. According to the statistics, most of the respondents had bachelor's degrees, making them fit for the study's target audience, and assisting in the achievement of the study's goals.

#### **4.2.1.4 Respondents' professional certification**

The study also tried to determine the profile of the respondents' existing certifications, with the following results: In terms of professional certification, the demographic profile revealed that most of the respondents had CPA certifications, accounting for approximately 66.2 percent of the total respondents (210), followed by ACCA certified respondents (83), accounting for approximately 26.1 percent, and CFE certified respondents (11), accounting for approximately 3.5 percent. Respondents with CFA certification were 9 in frequency, accounting for about 2.8 percent of all respondents, whereas respondents with other professional certificates were 4 in frequency, accounting for roughly 1.4 percent of all respondents. The findings supported the idea that, in addition to an academic qualification, most of the respondents were certified in their areas of specialization.

#### 4.2.1.4 Respondents' years of professional experience

Finally, to obtain insight into the respondents' professional experience in their various institutions, the study needed to create a profile of the respondents based on the number of years of professional experience. The following were the outcomes. The data revealed that most respondents had 6-10 years of professional experience, with 176 declaring that they had done so, accounting for around 55.5 percent of the total respondents. Those with 1-5 years of experience came in second, accounting for almost 48 percent of the entire population (15.1 percent). Those with 16-20 years of professional experience were 41 in frequency, accounting for about 12.9 percent of all respondents, followed by those with 11-15 years of professional experience, who were 37 in frequency, accounting for about 11.7 percent, and finally, those with over 20 years, who were 15 in frequency and accounting for about 4.7 percent of all respondents. As a result of the fact that 70.6 percent of the respondents had fewer than 10 years of professional experience, the researcher determined that most of the respondents were young.

### 4.3 Descriptive Statistical findings

The analysis was based on quantitative data from a 5-point Likert Scale survey. Mean, Median, and Standard deviation was used in the analysis of the research as descriptive analytical tools. The various findings are presented in accordance with how the study variables were conceptualized.

#### 4.3.1 Descriptive results Plan for fraud control

The first study variable was the plan for fraud control that the Western Kenya County Governments had in place. The results are shown in Table 4.8.

**Table 4. 2: Plan for fraud control results**

	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Std. Deviation</b>
Our county has an Integrated Macro-Policy that divides all tasks and responsibilities in the county and clarifies who is responsible for dealing with fraud in each line.	316	3.688	4.000	1.091

	N	Mean	Median	Std. Deviation
Our county has a fraud risk assessment plan that is intended to provide an up-to-date overview of the county regarding the risk of possible fraud.	316	3.786	4.000	0.950
Our county has a community awareness program in place to create fraud awareness to employees and customers.	316	3.827	4.000	1.093
Our county has a fraud reporting system that includes both external fraud disclosures and investigative procedures	316	3.839	4.000	1.269
Valid N (listwise)	316			

**Source: Research data, (2022)**

The respondents were presented with 5 questions on the plan for fraud control within the Western Kenya County Governments. The summary of the research responses showed there was agreement that a plan for fraud control helps to prevent fraud within the institutions, as indicated by a median of 4.000. The research noted agreement among respondents that the fraud risk assessment plan provides an up-to-date overview of the counties regarding the risk of possible fraud (mean = 3.786, SDV=0.950). The study indicated agreement among employees that an integrated macro-policy that divides all tasks and responsibilities and clarifies who is responsible for dealing with fraud in each line and a community awareness program for creating fraud awareness to the various stakeholders is vital in fraud prevention and detection within the counties (mean = 3.688, SDV 1.091). The respondents also agreed that the county governments have a fraud reporting system that includes both external fraud disclosures and investigative procedures (mean = 3.839, SDV=1,269). The above findings show agreement that to some extent fraud management policies are being effected within the Western Kenya County Governments.

#### **4.3.2 Descriptive results for Mechanism for reporting fraud**

The results of the study's second variable, which looked into the mechanisms for reporting fraud within the Western Kenya County Governments, are reported.

**Table 4. 3: Mechanism for reporting fraud results**

	N	Mean	Median	Std. Deviation
Our county has an effective mechanism for reporting fraud, which includes a system that hides the reporter's name.	316	3.618	4.000	0.943
Our county has an effective fraud reporting system that is independent of the occurrence of fraud.	316	3.864	4.000	1.069
Our county has excellent fraud reporting channels in place, with the goal of allowing reporters to submit reports via media that they consider comfortable.	316	3.741	4.000	0.989
Our county has a robust reporting system in place that follows up on reports as soon as possible in order to avoid fraud from becoming more serious.	316	3.669	3.000	1.170
Valid N (listwise)	316			

**Source: Research data, (2022)**

The study respondents were presented with 5 statements on the mechanism for reporting fraud. The findings show that the county governments agree that an effective fraud reporting system that is independent of the occurrence of fraud can help in fraud control as asserted by the mean of 3.618 and a SD of 0.943. The results also indicate agreement that the counties have a robust reporting system in place that follows up on reports as soon as possible in order to avoid fraud from becoming more serious, (Mean = 3.741, SDV = 0.989). The study respondents also agreed that the counties have an excellent fraud reporting channel in place, with the goal of allowing reporters to submit reports via media that they consider comfortable. (mean = 3.741, SDV = 0.989). Finally, the respondents agreed that the counties have an effective mechanism for reporting fraud, which includes a system that hides the reporter's name. (Mean 3.669, SDV 1.170) The above findings show agreement that to some extent fraud management policies are being effected within the Western Kenya County Governments.



### 4.3.3 Descriptive results for Policy of zero tolerance for fraud

The third variable reviewed the policy of zero tolerance for fraud as being effected in the Western Kenya County Governments.

**Table 4. 4: Policy of zero tolerance for fraud results**

	N	Mean	Median	Std. Deviation
Our county has an anti-fraud strategy that is based on a policy of integrity and zero tolerance for fraud	316	3.997	4.000	0.995
Our county government and management have a zero-tolerance attitude for fraud and have supported the establishment of an anti-fraud culture.	316	4.085	4.000	0.953
Our county has devised an anti-fraud plan that takes into account the unique characteristics of its operations.	316	3.186	3.000	1.180
Our county has made sure that the code of business ethics and corporate governance are in line with the anti-fraud policy, and that the powers and duties for fighting fraud are clearly stated.	316	3.700	4.000	1.010
Valid N (listwise)	316			

**Source: Research data, (2022)**

The study respondents were presented with 5 statements on policy of zero tolerance for fraud, and the respondents agreed that their county governments and management have a zero-tolerance attitude for fraud and have supported the establishment of an anti-fraud culture within the institutions (Mean = 4.085, SDV = 0.953). The respondents showed agreement their county governments have made sure that the code of business ethics and corporate governance are in line with the anti-fraud policy, and that the powers and duties for fighting fraud are clearly stated (Mean = 3.4984, SDV = 1.21859). The study indicated participants' agreement with the fact that the counties under study have devised an anti-fraud plan that takes into account the unique characteristics of their operations (Mean = 3.700, SDV = 1.010). The respondents

agreed that their counties have an anti-fraud strategy that is based on a policy of integrity and zero tolerance for fraud (Mean = 3.186, SDV = 1.180). The above results suggest that the counties' antifraud strategy is aligned with the studies proposals as noted by agreement on all statements presented.

#### 4.3.4 Descriptive results for fraud severity and reported cases

The fourth variable for the study reviewed the extent to which there's a reduction in the reported cases of simple and complex fraud within the Western Kenya County Governments.

**Table 4. 5: Fraud severity and reported cases**

	N	Mean	Median	Std. Deviation
The number of reported occurrences of fraud decreases during the introduction of fraud management policies and increases slightly after the policy is no longer in operation.	316	3.353	3.000	1.173
In our county, there was an increase in referrals for fraud during the post-zero tolerance times.	316	3.060	3.000	1.545
In our county, the severity of fraud management policies, coupled with the administrative scrutiny on cases deterred some individuals from engaging in fraud.	316	3.965	4.000	1.129
In our county, it was impossible to account for factors that might have influenced fraud caseloads, such as changing economic conditions, the end of a county leader's term, or administrative changes that might have affected cases.	316	3.659	4.000	1.229
Valid N (listwise)	316			

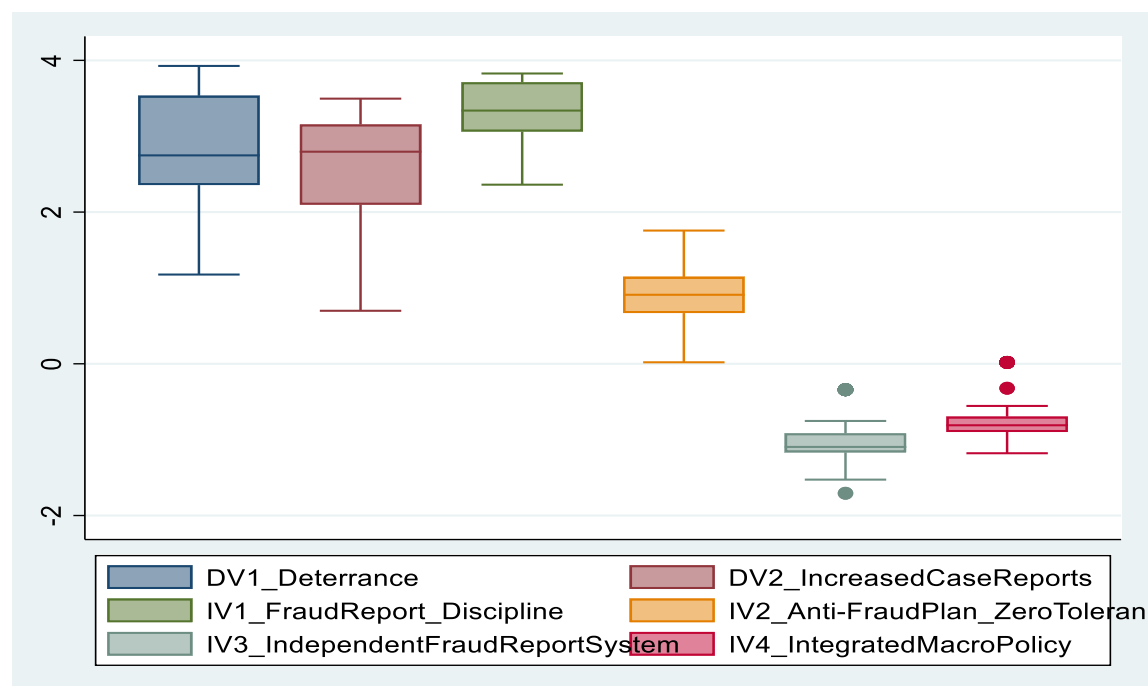
**Source: Research data, (2022)**

The study respondents showed agreement that there was an increase in referrals for fraud during the post-zero tolerance for fraud periods within the county governments (Mean = 3.060, SDV = 1.545). The respondents also agreed that it was impossible to account for factors that might have influenced fraud caseloads, such as changing economic conditions, the end of a county leader's term, or administrative changes that might have affected cases (Mean = 3.659, SDV = 1.229). The participants also agreed that the number of reported occurrences of fraud decreases during the introduction of fraud management policies and increases slightly after the policy is no longer reinforced (Mean = 3.353, SDV = 1.173). There was also an agreement among the respondents that fraud severity and reported cases, coupled with the administrative scrutiny of cases deterred some individuals from engaging in fraud (Mean = 3.965, SDV = 1.129). The findings indicated that the county leaderships were aware of their operating environment and how imperative it is to the prevention and detection of fraud.

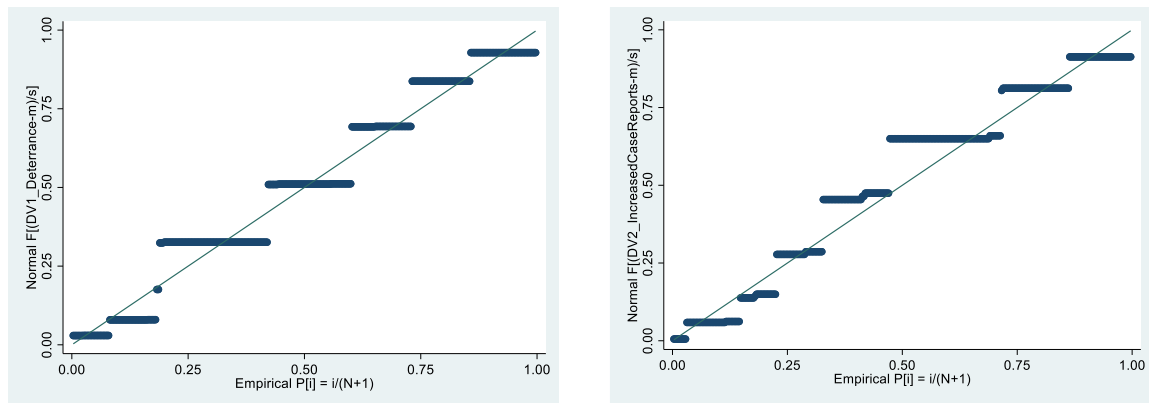
#### 4.4 Diagnostic Tests

##### 4.4.1 Normality test

The normality for the dependent and other variables was checked using both box plots and probability plots. Based on the figures presented, the dependent variables were relatively skewed, with the fraud deterrence skewed to the right while the fraud case reporting skewed to the left. Owing to the non-normality of the dependent variable, the ordered logistic regression approach was utilized in the multivariate analyses.



**Figure 4. 2: Normality test using box plots**



**Figure 4. 3: Probability plots for the dependent variables**

#### 4.4.2 Multicollinearity Test

A multicollinearity test for the independent variables was also performed on the independent variables using the variance inflation factors (VIFs). Based on the results in Table 4.6, the highest VIF was 2.65, which is below 5, hence multicollinearity was not a major problem in the independent variables.

**Table 4. 6: Variance inflation factors and tolerance**

Variable	VIF	Tolerance (1/VIF)
IV4_IntegratedMacroPolicy	2.65	0.377
IV3_IndependentFraudReportSystem	1.58	0.631
IV2_Anti-FraudPlan_ZeroTolerance	1.54	0.650
IV1_FraudReport_Discipline	1.51	0.662
Gender	1.39	0.719
Org	1.01	0.993
Mean VIF	1.61	

#### 4.4.3. Kruskal–Wallis equality-of-populations rank test

Given the non-parametric nature of the data, a test was performed to establish whether there are any significant differences in the means of the dependent variables, given the organization nature, whether county government or the office of the auditor general responses. Based on the Kruskal Wallis equality of populations rank test, the chi-square coefficients are not significant at the 5 percent level. This leads us to reject the alternate hypothesis and conclude that both groups of respondents (i.e., the county government and office of the auditor general) responses

originate from a similar distribution. Therefore, the responses are not statistically different from each other. This provides a case for pooling the analysis of all the 361 responses, without having to separate them into two categories.

**Table 4. 7: Kruskal–Wallis equality-of-populations rank test**

<i>DVI_Deterrence, by(Org)</i>					
Org	Obs	Rank sum	Kruskal–Wallis		
			chi2	probability	
	1	280	44643.00	0.260	0.610
	2	36	5443.00	0.265	0.607

<i>DV2_IncreasedCaseReports , by(Org)</i>					
Org	Obs	Rank sum	Kruskal–Wallis		
			chi2	probability	
	1	280	44224.50	0.091	0.763
	2	36	5861.50	0.092	0.761

## 4.5 Principal Component-Factor Analysis (PCFA)

### 4.5.1. PCFA analysis for the independent variables

The principal component-factor analysis (PCFA) was used to create a reasonable summary of the study findings of the relationships between the variables into smaller factors without sacrificing too much information (Hayton et al., 2004). To provide research findings, the study used KMO and Bartlett's Tests, principal component analysis, scree plot, and rotated component matrix. The results are shown in table 4.8

**Table 4. 8: Eigen Values and Sampling Adequacy Tests**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	4.631	1.687	0.309	0.309
Factor2	2.944	1.277	0.196	0.505
Factor3	1.667	0.420	0.111	0.616
Factor4	1.247	0.252	0.083	0.699
Factor5	0.995	0.222	0.066	0.766
Factor6	0.773	0.235	0.052	0.817
Factor7	0.538	0.016	0.036	0.853
Factor8	0.522	0.060	0.035	0.888
Factor9	0.462	0.148	0.031	0.919

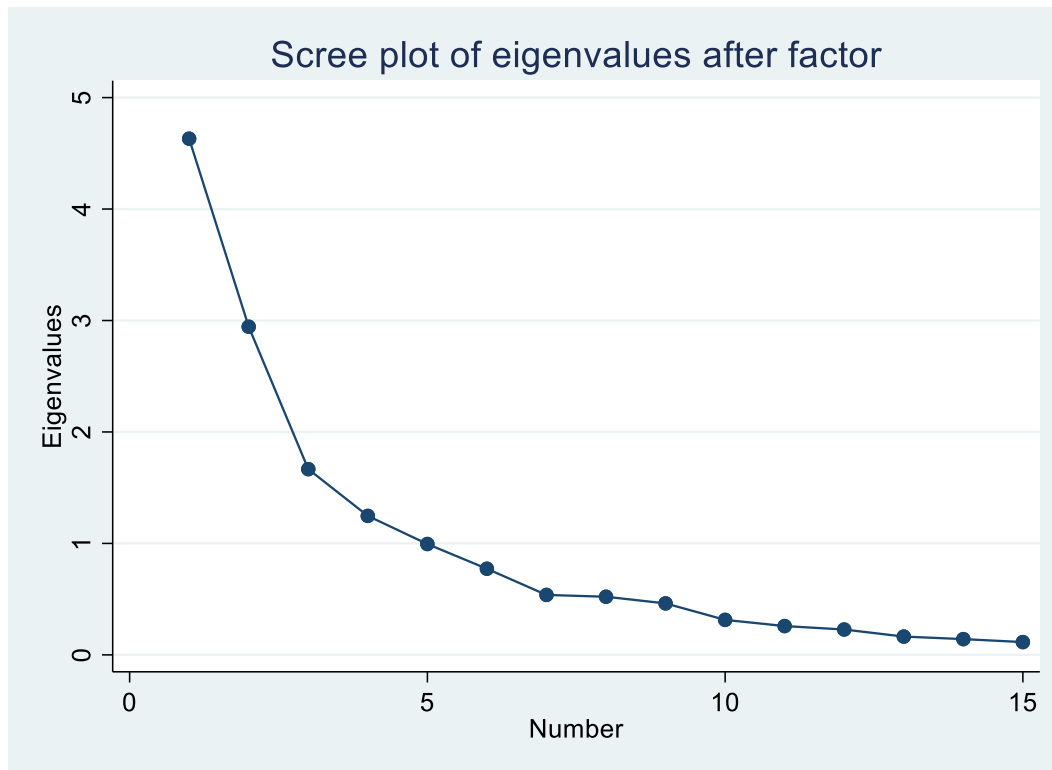
Factor10	0.314	0.056	0.021	0.940
Factor11	0.259	0.031	0.017	0.957
Factor12	0.227	0.063	0.015	0.972
Factor13	0.164	0.023	0.011	0.983
Factor14	0.142	0.027	0.009	0.992
Factor15	0.115	.	0.008	1.000
<hr/>				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.644			
Bartlett's Test of Sphericity				
Approx. Chi-Square	4121.255			
df	171			
Sig.	0.00			
<hr/>				

**Table 4. 9: Principal Component Analysis-Factor Analysis**

Variable	Description	<i>Communalities</i>				Uniqueness
		Factor1: Fraud reporting and disciplinary measures	Factor2: Anti-fraud plan and zero tolerance to fraud	Factor3: Independent fraud reporting system	Factor4: Integrated macro-policy with clear responsibilities for fraud	
Fraud_Cont1	Our county has an Integrated Macro-Policy that divides all tasks and responsibilities in the county and clarifies who is responsible for dealing with fraud in each line.			-0.487	0.565	0.170
Fraud_Cont2	Our county has a fraud risk assessment plan that is intended to provide an up-to-date overview of the county regarding the risk of possible fraud.		-0.660			0.478
Fraud_Cont3	Our county has a community awareness program in place to create fraud awareness to employees and customers.			-0.753		0.230
Fraud_Cont4	Our county has a fraud reporting system that includes both external fraud disclosures and investigative procedures.	0.625				0.544
Fraud_Cont5	Our county has a conduct and disciplinary standard that all county workers and other parties dealing with the county, such as contractors, subcontractors, consultants, and others, follow as anti-fraud values.	0.693				0.362
Report_Fra1	Our county has an effective mechanism for reporting fraud, which includes a system that hides the reporter's name.		-0.589			0.312
Report_Fra2	Our county has an effective fraud reporting system that is independent of the occurrence of fraud.			0.540		0.256

Variable	Description	<i>Communalities</i>				Uniqueness
		Factor1: Fraud reporting and disciplinary measures	Factor2: Anti-fraud plan and zero tolerance to fraud	Factor3: Independent fraud reporting system	Factor4: Integrated macro-policy with clear responsibilities for fraud	
Report_Fra3	Our county has excellent fraud reporting channels in place, with the goal of allowing reporters to submit reports via media that they consider comfortable.	0.665			-0.454	0.259
Report_Fra4	Our county has a robust reporting system in place that follows up on reports as soon as possible in order to avoid fraud from becoming more serious.	0.815				0.323
Report_Fra5	There are policies in place in our county regarding the fraud reporter's immunity from disciplinary actions and litigation	0.694			-0.466	0.208
Fraud_Toler1	Our county has an anti-fraud strategy that is based on a policy of integrity and zero	0.766				0.315
Fraud_Toler2	Our county government and management have a zero-tolerance attitude for fraud and have supported the establishment of an anti-fraud culture.		0.589			0.290
Fraud_Toler3	Our county has devised an anti-fraud plan that takes into account the unique characteristics of its operations.		0.721			0.258
Fraud_Toler4	Our county has made sure that the code of business ethics and corporate governance are in line with the anti-fraud policy, and that the powers and duties for fighting fraud are clearly stated.		0.685		-0.455	0.304
Fraud_Toler5	Our county has a model anti-fraud plan that takes into account the current state of the public sector in Kenya, as well as the causes of fraud, as well as the country's economic, legal, social, and cultural systems.		0.759			0.203





**Figure 4. 4: Scree Plot of Eigenvalues**

The Kaiser Meyer-Olkin Measure of Sampling Adequacy (KMO) was used in the study to assess the suitability of the sample for factor analysis. KMO advises that a variable reach a minimum of 0.5; good values are between 0.7 and 0.8, and great values are between 0.8 and above 0.9. To be appropriate, Bartlett's Test of Sphericity must be substantial ( $p < .05$ ). The results shown in table 4.8 show a KMO score of 0.644, which is acceptable for Bartlett's Test of Sphericity (Sig = .05). This demonstrates that independent variables can be used in factor analysis.

The results indicate that four components for the independent variable were extracted. The cut-off for the selection of the variables requires eigenvalues above 1.0. The findings of the research in table 4.8 show that the factors had eigenvalue, which was higher than 1. Values greater than one were considered and interpreted as factors. The four factors explained 69.90% of the variants in the data matrix. Component one explains about 30.90% of the variance, component two explains about 19.60% of the variance, component three explains about 11.10% and component four explains about 8.30% of the variance.

Varimax rotation was applied to the variables after factor extraction. The correlations between the variables and the factors are represented by the rotated factor loadings in the rotated component matrix. A factor loading of 0.3 or more is regarded as sufficient (Cohen et al., 2013). For the study, the factor loading for the sub-variables of independent variable ranges that fit in components 1, 2, 3, and 4 and fulfilled the minimum recommended criterion of 0.3 was used. The correlation between the variables and each of the retrieved factors is provided in the matrix in table 4.9. The variable with the highest value in each row is chosen to be a member of each factor in order to determine the variables that make up that factor. Factor 1 contains six sub-variables; factor two contains four sub-variables; factor three contains one sub variable while factor 4 contains one sub-variable. From the scree plot displayed in Figure 4.4, it appears that a 4- factor model should be sufficient. This is because the curve levels out after the second factor.

#### 4.5.2 PCFA analysis for the dependent variable

Factor Analysis is used to create a reasonable summary of the study findings of the relationships between the variables into smaller factors without sacrificing too much information (Hayton et al., 2004). To provide research findings for the dependent variable, table 4.10 shows the factor loadings for the dependent variables and the corresponding eigenvalues. Further, the scree plot for the eigenvalues for the dependent variable has been shown in figure 4.5.

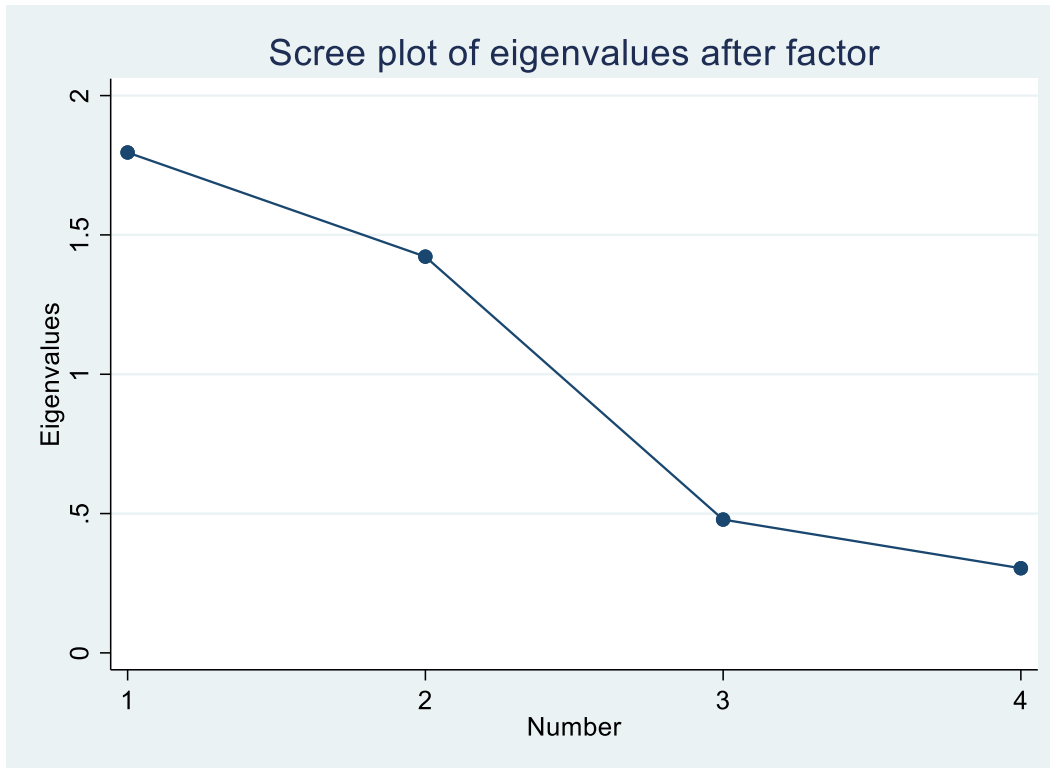
**Table 4. 10: Factor loadings for the dependent variable**

Variable	Description	<i>Communalities</i>		Uniqueness
		Factor1:	Factor2:	
		Deterrence effect of fraud management policies (Deterrence)	Increased case reporting of fraud activities due to existence of policy (Increased Case Reports)	
Case_Report1	The number of reported occurrences of fraud decreases during the introduction of fraud management policies and		<b>0.718</b>	0.228

Variable	Description	<i>Communalities</i>		Uniqueness
		Factor1: Deterrence effect of fraud management policies (Deterrence)	Factor2: Increased case reporting of fraud activities due to existence of policy (Increased Case Reports)	
	increases slightly after the policy is no longer in operation.			
Case_Report2	In our county, there was an increase in referrals for fraud during the post-zero tolerance times.		<b>0.681</b>	0.232
Case_Report3	In our county, the severity of fraud management policies, coupled with the administrative scrutiny on cases deterred some individuals from committing fraud	<b>0.788</b>		0.159
Case_Report4	In our county, it was impossible to account for factors that might have influenced fraud caseloads, such as changing economic conditions, the end of a county leader's term, or administrative changes that might have affected cases.	<b>0.783</b>		0.163

**Table 4. 11: Eigen values– dependent variable**

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1.796	0.374	0.449	0.449
Factor2	1.422	0.944	0.356	0.805
Factor3	0.478	0.175	0.120	0.924
Factor4	0.304	.	0.076	1.000



**Figure 4. 5: Scree plot for the eigenvalues – dependent variable**

Varimax rotation was applied to the dependent variable after factor extraction. The correlations between the variable and the factors are represented by the rotated factor loadings in the rotated component matrix. A factor loading of 0.3 or more is regarded as sufficient Cohen et al. (2013). For the study, the factor loading for the sub-variables of dependent variable ranges that fit in components 1 and 2 and fulfilled the minimum recommended criterion of 0.3 was used. The correlation between the variable and each of the retrieved factors is provided in the matrix in table 4.10. The variable with the highest value in each row is chosen to be a member of each factor in order to determine the variables that make up that factor. Factor 1 contains two sub-variables, and factor two contains two sub-variables.

The study results indicate that two components for the dependent variable were extracted. The cut-off for the selection of the variables requires eigenvalues above 1.0. The findings of the research in table 4.11 show that the factors had eigenvalue, which was higher than 1. Values greater than one were considered and interpreted as factors. The two factors explained 80.50% of the variants in the data matrix. Component one explains about 44.90% of the variance and component two

explains about 35.60% of the variance. From scree plot displayed in Figure 4.5, it appears that a 2- factor model should be sufficient. This is because the curve levels out after the second factor.

#### **4.4.3 Correlation analysis**

The study aimed at determining how the variables interact with each other. The most acceptable method was thought to be Spearman Rank correlation because the research was based on questionnaires using Likert scales. The correlation test results are displayed in Table 4.12

**Table 4. 12: Spearman's Rank Correlation results**

Variable	DV1_Deterrance	DV2_IncreasedCaseReports	IV1_FraudReport_Discipline	IV2_Anti-FraudPlan_ZeroTolerance	IV3_IndependentFraudReportSystem	IV4_IntegratedMacroPolicy	Gender	Org
DV1_Deterrance	1.000							
DV2_IncreasedCaseReports	-0.117**	1.000						
<i>p-value</i>	<i>0.04</i>							
IV1_FraudReport_Discipline	0.207***	-0.023	1.000					
<i>p-value</i>	<i>0.00</i>	<i>0.68</i>						
IV2_Anti-FraudPlan_ZeroTolerance	0.060	0.855***	0.129**	1.000				
<i>p-value</i>	<i>0.29</i>	<i>0.00</i>	<i>0.02</i>					
IV3_IndependentFraudReportSystem	-0.096*	0.020	0.051	0.085	1.000			
<i>p-value</i>	<i>0.09</i>	<i>0.73</i>	<i>0.36</i>	<i>0.13</i>				
IV4_IntegratedMacroPolicy	-0.297***	-0.146***	-0.430***	-0.259***	-0.262***	1.000		
<i>p-value</i>	<i>0.00</i>	<i>0.01</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>			
Gender	0.259***	-0.499***	0.229***	-0.356***	-0.027	-0.272***	1.000	
<i>p-value</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.64</i>	<i>0.00</i>		
Org	-0.029	0.017	0.028	0.018	0.081	-0.010	-0.048	1.000
<i>p-value</i>	<i>0.61</i>	<i>0.76</i>	<i>0.63</i>	<i>0.76</i>	<i>0.15</i>	<i>0.87</i>	<i>0.40</i>	
VIFs	na	na	1.51	1.54	1.58	2.65	1.39	1.01
Tolerance	na	na	0.66	0.65	0.63	0.38	0.72	0.99

Note: \*, \*\* and \*\*\* denote significance at the 10, 5 and 1 percent, respectively. P-values are in italics.

The study sought to establish the role of the plan for fraud control, a mechanism for reporting fraud, and a policy of zero tolerance for fraud in mitigating the severity and reporting of fraud cases in the public sector: The case of County Governments in Western Kenya. It was concluded that a fraud report discipline had a low positive correlation ( $R_h = .207$ ,  $Sig = .000 < .05$ ). This implies that the fraud report discipline explains 20.7% of the variability in reported cases and fraud severity. A policy of zero tolerance for fraud has a strong positive effect ( $R_h = .855$ ,  $Sig = .000 < .05$ ). This implies that a policy of zero tolerance for fraud explains 85.5% of the variability in reported cases and fraud severity. Gender had a low positive correlation ( $R_h = .259$ ,  $Sig = .000 < .05$ ). This was evidenced by the p-value of 0.000 which is less than the critical value of 0.05. This suggests that the gender of the county staff members explains 25.9% of the variability in reported cases and fraud severity. VIF gauges how multicollinearity among the Xs in a regression model affects estimation accuracy. It describes the extent to which multicollinearity among the predictors reduces an estimate's accuracy. The VIF statistic is used to assess any potential multicollinearity among the explanatory or predictive factors. For each of the  $k - 1$  independent variable equations, VIF is calculated as  $(1/(1-R^2))$ . The VIF of 1.51, 1.54, 1.58, 2.65, 1.39 and 1.01 were reported for fraud report discipline, anti-fraud plan, independent fraud reporting systems, integrated macro-policy, gender and organization respectively. Since the VIFs were less than 5, then multicollinearity was not a problem among the independent variables in the study.

#### **4.4.3 Ordinal (Ordered) Logistic Regression**

##### *4.4.3.1 Fraud management policies and their effect on fraud reported cases and fraud severity*

Ordinal regression analysis was used to show the relationship between the independent variables and the dependent variable. Table 4.13 presents the results of the ordered logistic regression for the fraud deterrence model. The total number of observations were 316 and there were no missing values. Both disaggregated (models 1-4) and aggregated (model 5) analyses were performed to check the robustness and significance of the coefficients on the independent variables. The reporting and interpretation of the results is largely based on the results contained in the aggregated model 5.

**Table 4. 13: Ordered Logistic Regression results- Reported cases Model**

<i>Dependent variable</i>	<i>Deterrence effect of fraud management policies (reported cases)</i>				
<i>Model</i>	<i>[1]</i>	<i>[2]</i>	<i>[3]</i>	<i>[4]</i>	<i>[5]</i>
<i>Independent variables</i>					
IV1_FraudReport_Discipline	1.083*** (3.61)				-0.216 (-0.64)
IV2_Anti-FraudPlan_ZeroTolerance		0.467 (1.76)			0.794*** (-2.57)
IV3_IndependentFraudReportSystem			-0.460 (-1.25)		2.770*** (-5.55)
IV4_IntegratedMacroPolicy				-3.377*** (-5.79)	6.493*** (-7.01)
<i>Controls</i>					
Gender	0.800*** (3.71)	1.086*** (4.92)	1.030*** (4.75)	0.629*** (2.90)	0.536** (2.20)
Org	-0.089 (-0.29)	-0.032 (-0.11)	-0.070 (-0.23)	-0.093 (-0.31)	-0.153 (-0.51)
<i>Model specification</i>					
LR chi <sup>2</sup>	35.10	25.01	23.46	56.20	88.51
Prob > chi <sup>2</sup>	0.00	0.00	0.00	0.00	0.00
Pseudo R <sup>2</sup>	0.02	0.02	0.02	0.04	0.06
Log likelihood	-709.56	-714.61	-715.38	-699.01	-682.85
Number of observations	316	316	316.00	316	316

Note: \*, \*\* and \*\*\* denote significance at the 10, 5 and 1 percent, respectively. z-values are in parentheses.

The results in Table 4.13, model 5 show that the coefficient on IV2\_anti-fraud plan and zero tolerance to fraud is positive and highly significant at the 1 percent level (coefficient=0.794, z-value=-2.57). This means that having anti-fraud plans and a strict zero-tolerance policy toward fraud is a useful component in deterring fraud. This implies that the implementation of robust anti-fraud plans in counties is useful in abetting fraud from occurring. The genuine promotion of a strict zero-tolerance to fraud, both in appearance and in practice is also a useful mechanism towards abetting fraud. Further, the results in Table 4.13 model 5 show that the coefficient on the IV3\_Independent fraud reporting system is positive and highly significant at the 1 percent level (coefficient = 2.770, z-value = -5.55). This implies that having an independent fraud reporting system in the counties is useful in mitigating fraud from occurring. The results also indicate that



the coefficient on IV4\_integrated macro policy is positive at the 1 percent level (coefficient =6.493, z-value = -7.01). This shows that having an integrated macro policy in the counties is useful in curbing fraudulent activities from occurring. According to the qualitative responses, the respondents highlighted the following:

“.... among the most useful fraud deterrence measures include fraud awareness programs, having a robust whistle blowing protection and the presence of fraud reporting system” (respondents 5, 23 and 28 respectively).

This observation is consistent with the quantitative findings that having an independent fraud reporting system and integrated macro policy that embraces fraud awareness, whistleblowing and a clear reporting system is useful in deterring fraud.

The model specification in Table 4.13 presented the robustness of the regression results – the Prob, LR, and Pseudo  $R^2$ . The existence of an association between the independent variable and the dependent variable relies on the statistical significance of the final model. According to the findings, as shown in Table 4.13, the -2 Log Likelihood of the model with only intercept was 88.51, and the -2 Log Likelihood of the model with intercept and the independent variables is 0.000. The difference (Chi-square statistics) is  $88.51 - 0.000 = 88.51$  which is significant at  $\alpha=0.05$ , as the p-value is 0.000. This implies that there is a significant relationship between dependent and independent variables in the complimentary Log-log link function. The whole model almost precisely predicts the outcome because the model specification's pseudo-R-squared has a maximum value that is not 1, as evidenced by the likelihood value of 0.06. The chance of the model correctly predicting the outcome is  $R\text{-squared} = 0.06$ .

#### *4.4.3.2 Fraud management policies and their effect on fraud deterrence*

In Table 4.14, the results of the ordered logistic regression for the fraud case reporting model are reported. As was the earlier case, both the disaggregated (models 1-4) and aggregated (model 5) results are reported to illustrate the robustness of the coefficients on the independent variables. The reporting and interpretation of the results is based on model 5.

**Table 4. 14: Ordered Logistic Regression results- Fraud Severity model**

<i>Dependent variable</i> <i>Model</i>	<i>Deterrence effect of fraud management policies (fraud severity)</i>				
	[1]	[2]	[3]	[4]	[5]
<i>Independent variables</i>					
IV1_FraudReport_Discipline	1.001*** (3.34)				0.870** (-2.27)
IV2_Anti-FraudPlan_ZeroTolerance		8.258*** (15.14)			7.891** *
IV3_IndependentFraudReportSystem			0.116 (0.31)		-0.579 (-1.04)
IV4_IntegratedMacroPolicy				- 4.591*** (-8.68)	2.737** *
<i>Controls</i>					
Gender	- 2.273*** (-9.24)	- 1.693*** (-6.86)	- 2.003*** (-8.71)	- 2.912*** (10.79)	2.019** *
Org	0.019 (0.06)	-0.122 (-0.38)	-0.013 (-0.04)	-0.182 (-0.57)	-0.203 (-0.63)
<i>Model specification</i>					
LR chi <sup>2</sup>	96.28	490.05	85.24	158.90	500.40
Prob > chi <sup>2</sup>	0.00	0.00	0.00	0.00	0.00
Pseudo R <sup>2</sup>	0.06	0.33	0.06	0.11	0.33
Log likelihood	-704.00	-507.12	-709.52	-672.69	-501.94
Number of observations	316	316	316	316	316

Note: \*, \*\* and \*\*\* denote significance at the 10, 5 and 1 percent, respectively. z-values are in parentheses.

According to the results in Table 4.14, the coefficient on the IV1\_FraudReport\_Discipline is positive and relatively significant at the 5 percent level (coefficient = 0.870, z-value = -2.27). This means that the adoption of fraud reporting and the implementation of strict disciplinary measures for offenders helps in reducing the fraud severity. When an organization is seen as proactive in encouraging anonymous and secured reporting of fraud cases, this is very helpful in abetting fraud since the offenders are afraid of being reported to the authorities. The same effect is evident where the management is seen taking real action in terms of instituting disciplinary measures against the offenders. Other personnel is dissuaded from engaging in fraud and as a result, the reported fraud

cases are likely to decline. This finding further illustrates the need for county executives and managers to take real action on fraud cases which helps in reducing fraud occurrence in the counties. The coefficient on the IV4\_IntegratedMacroPolicy is positive and highly significant at the one percent level (coefficient = 2.737, z-value = -2.96). This implies that the adoption of integrated macro policy measures assists in reducing the number of reported fraud cases. When an entity is seen as proactive in the implementation of an integrated macro policy, this is helpful in mitigating fraud since the perpetrators are afraid of being identified by the authorities. Finally, the control, Gender is positive and highly significant at 1 percent level (coefficient = 2.019, z – value = -7.05). this means that the gender of the county employees plays a role in the number of reported fraud cases. When an entity is seen to have a high number of a particular gender, this helps in reducing the fraud case reported.

The model specification in Table 4.14 presented the robustness of the regression results – the Prob, LR, and Pseudo  $R^2$ . The existence of an association between the independent variable and the dependent variable relies on the statistical significance of the final model. According to the findings, as shown in Table 4.14, the -2 Log Likelihood of the model with only intercept was 500.40, and the -2 Log Likelihood of the model with intercept and the independent variables is 0.000. The difference (Chi-square statistics) is  $500.40 - 0.000 = 500.40$  which is significant at  $\alpha=0.05$ , as the p-value is 0.000. This implies that there is a significant relationship between dependent and independent variables in the complimentary Log-log link function. The whole model almost precisely predicts the outcome because the model specification's pseudo-R-squared has a maximum value that is not 1, as evidenced by the likelihood value of 0.33. The chance of the model correctly predicting the outcome is  $R\text{-squared} = 0.33$ .

## **CHAPTER FIVE: DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS**

### **5.1 Introduction**

The study's discussion of findings in relation to the study's specific objectives is mentioned at the start of this section. It further gives an overall conclusion for the study and specific recommendations for further research. The chapter ends with the assessment of the main limitations related to the chosen approach.

### **5.2 Discussion of findings**

This section discusses the findings in relation to the study's specific objectives.

#### **5.2.1 The role of a fraud control plan in mitigating the severity and improved reporting of fraud cases**

The study's findings established that a fraud control plan significantly influence the severity and reporting of fraud cases in the public sector. The first objective sought to establish the role of a fraud control plan in mitigating the severity and improved reporting of fraud cases. The results in Table 4.13, model 5 show that the coefficient on IV2\_anti-fraud plan and zero tolerance to fraud is positive and highly significant at the 1 percent level (coefficient=0.794, z-value=-2.57). This means that having anti-fraud plans and a strict zero-tolerance policy toward fraud is a useful component in deterring fraud. This implies that the implementation of robust anti-fraud plans in counties is useful in abetting fraud from occurring. The genuine promotion of a strict zero-tolerance to fraud, both in appearance and in practice is also a useful mechanism towards abetting fraud. This finding is echoed by Afriyie et al. (2022) who revealed that a fraud control plan has a beneficial impact mitigating the severity and reporting of fraud cases. This was demonstrated by a strong likelihood that the variable fraud control plan will stop fraud. This outcome is consistent with the earlier discoveries. Akinbowale et al. (2021) are of similar views that a plan for fraud control, which includes a clearly stated strategy for combating fraud, has a positive and

considerable impact on fraud prevention. Further, the study shows that a plan for fraud control and management control systems is a tool for combating cyber fraud.

However, the level of implementation and preference varied from one response to the other. The respondents were presented with five questions on the fraud control plan within the Western Kenya County Governments. The summary of the research responses showed there was agreement that a plan for fraud control helps to prevent fraud within the institutions, as indicated by a mean of 3.7918. The findings are in line with Eko et al. (2020) who opined that the implementation of fraud management policies considerably improved the detection and prevention of fraud in the banking system. The research noted agreement among respondents that the fraud risk assessment plan provides an up-to-date overview of the counties regarding the risk of possible fraud (mean = 3.6814). This is in line with the findings of Zimbelman (2018), who noted that a plan for antifraud strategy in an organization is vital since it assists in the deterrence of fraud.

The study also indicated agreement among study participants that an integrated macro-policy that divides all tasks and responsibilities and clarifies who is responsible for dealing with fraud in each line and a community awareness program for creating fraud awareness to the various stakeholders is vital in fraud prevention and detection within the counties (mean = 3.4164). This finding is in line with the findings of Tuanakotta (2018) , who noted that an integrated macro-policy that provides clarity on the responsibility of every stakeholder in an organization is vital for fraud prevention and detection. The study respondents also agreed that the county governments have a fraud reporting system that includes both external fraud disclosures and investigative procedures (mean = 3.7918). The above findings show agreement with the findings of Karuti (2020) who concluded that there's a fraud reporting system within the Kenyan County governments but the challenge among the counties is the implementation of the procedures. These findings are in line with the arguments of the deterrence theory. The theory holds that deterrence is helpful in public entities in order to control employees' behavior, especially in the fight against fraud.

### **5.2.2 Contribution of Mechanism for reporting fraud towards minimizing the severity and improved reporting of fraud cases**

The ordinal logistic regression findings revealed that the mechanism for reporting fraud significantly influences the severity and reporting of fraud cases in the public sector. The second objective sort after the effect of the mechanism for reporting fraud towards minimizing the severity and improved reporting of fraud cases, with the analysis revealing that there was strong agreement that the mechanism for reporting fraud has a strong and positive effect on fraud detection and prevention in the counties. According to the results in Table 4.14, the coefficient on the IV1\_FraudReport\_Discipline is positive and relatively significant at the 5 percent level (coefficient = 0.870, z-value = -2.27). This means that the adoption of fraud reporting and the implementation of strict disciplinary measures for offenders helps in reducing the fraud case reported. When an organization is seen as proactive in encouraging anonymous and secured reporting of fraud cases, this is very helpful in abetting fraud since the offenders are afraid of being reported to the authorities. The same effect is evident where the management is seen taking real action in terms of instituting disciplinary measures against the offenders. The findings support the study of Miceli et al., 2009 which revealed that the mechanism for reporting fraud is one of the most perceived effective fraud prevention techniques which is rarely implemented to curb fraud stating that it is very effective.

The study respondents were presented with five statements on the mechanism for reporting fraud. The findings show that the county governments have an effective fraud reporting system that is independent of the occurrence of fraud as asserted by the mean of 3.7792 and a SD of 1.23573. This finding is in agreement with the findings of Ocansey (2017) who noted that the use mechanism for reporting fraud as an antifraud strategy is an effective strategy for fraud deterrence and detection.

The results also indicate agreement that the counties have a robust reporting system in place that follows up on reports as soon as possible in order to avoid fraud from becoming more serious, (Mean = 3.6751, SDV = 1.20591). This finding is in agreement with the findings of Karuti (2020) who noted that there's a robust reporting system among the county governments except for full implementation of the processes due to the tone at the top. The study respondents also agreed that the counties have an excellent fraud reporting channel in place, with the goal of allowing reporters to submit reports via media that they consider comfortable (mean = 3.4353, SDV = 1.12779).

Finally, the respondents agreed that the counties have an effective mechanism for reporting fraud, which includes a system that hides the reporter's name (Mean 3.4164, SDV 1.36298). The above findings show agreement that to some extent fraud management policies are being effected within the Western Kenya County Governments. This finding concurs with the findings of Karuti (2020) who also found out that the fraud reporting mechanism within the county governments is effective and thus if fully utilized can result in a reduction of fraudulent cases. These findings are in line with the arguments of the deterrence theory. The theory holds that deterrence is helpful in public entities in order to control employees' behavior, especially in the fight against fraud.

### **5.2.3 The role of Zero tolerance to fraud policies with regard to reducing the severity and improved reporting of fraud cases**

The study findings established that the policy of zero tolerance for fraud significantly influence the severity and reporting of fraud cases in the public sector. The third objective sort to determine the effect of the policy of zero tolerance for fraud with regard to reducing the severity and improved reporting of fraud cases with the findings showing that respondents were in agreement that a policy of zero tolerance for fraud plays a key role in mitigating the severity and reporting of fraud cases in the public sector. These sentiments are shared by Khadra and Dalen (2020) who revealed that the implementation of a zero-tolerance for fraud policy is effective in fraud control within organizations.

The study respondents were presented with 4 statements on policy of zero tolerance for fraud, and the respondents agreed that their county governments and management have a zero-tolerance attitude for fraud and have supported the establishment of an anti-fraud culture within the institutions (Mean = 3.5836, SDV = 1.25667). This finding agrees with Alfian et al. (2017) who noted that the banking industry has a policy of zero tolerance for fraud and this has supported the establishment of the anti-fraud culture within the banking industry. The respondents also showed agreement that their county governments have made sure that the code of business ethics and corporate governance are in line with the anti-fraud policy, and that the powers and duties for fighting fraud are clearly stated (Mean = 3.4984, SDV = 1.21859). This finding is in line with the findings of Opiyo (2017) who opined that corporate governance plays a big role in fraud mitigation

among the parastatals in Kenya. The study indicated participants' agreement with the fact that the counties under study have devised an anti-fraud plan that considers the unique characteristics of their operations (Mean = 3.4669, SDV = 1.18656).

Finally, the research participants agreed that their counties have an anti-fraud strategy that is based on a policy of integrity and zero tolerance for fraud (Mean = 3.4164, SDV = 1.36298). This finding is in line with Karuti (2020) who concluded that the county governments have a working anti-fraud strategy that includes policies of zero tolerance for fraud as mechanisms for combating fraud. The above results suggest that the counties' antifraud strategy is aligned with the studies proposals as noted by agreement on all statements presented. These findings are in line with the arguments of the deterrence theory. The theory holds that deterrence is helpful in public entities in order to control employees' behavior, especially in the fight against fraud.

#### **5.2.4 Fraud severity and reported cases.**

According to the results in Table 4.14, the coefficient on the IV1\_FraudReport\_Discipline is positive and relatively significant at the 5 percent level (coefficient = 0.870, z-value = -2.27). This means that the adoption of fraud reporting and the implementation of strict disciplinary measures for offenders helps in reducing the fraud case reported. When an organization is seen as proactive in encouraging anonymous and secured reporting of fraud cases, this is very helpful in abetting fraud since the offenders are afraid of being reported to the authorities. Findings revealed that fraud management policies have a relatively significant influence in mitigating the severity and reporting of fraud cases in the public sector. Study participants who believed that fraud management policies improve internal control systems within the organization were more likely to detect and prevent fraud than those who did not. The findings concur with those of Karuti (2020) who revealed that the extent of fraud detection and prevention among the listed firms is influenced by fraud management policies. The study found that fraud management policies improve internal control systems within an organization.

In addition, the study also indicated agreement among study participants that an integrated macro-policy that divides all tasks and responsibilities and clarifies who is responsible for dealing with



fraud in each line and a community awareness program for creating fraud awareness to the various stakeholders is vital in fraud prevention and detection within the counties. This finding is in line with the findings of Tuanakotta (2018) , who noted that an integrated macro-policy that provides clarity on the responsibility of every stakeholder in an organization is vital for fraud prevention and detection. Further, the respondents agreed that their county governments and management have a zero-tolerance attitude for fraud and have supported the establishment of an anti-fraud culture within the institutions. This finding agrees with Alfian et al. (2017) who noted that the banking industry has a policy of zero tolerance for fraud and this has supported the establishment of the anti-fraud culture within the banking industry.

The results established an agreement among the respondents that the counties have experienced a decrease in the severity and reporting of fraud cases as a result of an effective mechanism for reporting fraud, which includes a system that hides the reporter's name. The above findings show agreement that whenever forensic management policies were fully implemented, there was a reduction in the reported cases of both simple and complex fraud. This finding concurs with the findings of Karuti (2020) who also found out that the fraud reporting mechanism within the county governments is effective and thus if fully utilized can result in a reduction of fraudulent cases. These findings are in line with the arguments of the fraud triangle theory. The theory holds that individuals may be subjected to excessive pressure but only engage in fraudulent activities if there's an opportunity to do so.

### **5.3 Conclusion**

The analysis showed that fraud management policies have a significant influence in mitigating the severity and reporting of fraud cases in the public sector. Findings revealed that a plan for fraud control, a mechanism for reporting fraud and a policy of zero tolerance for fraud all play a key role in mitigating the severity and reporting of fraud cases in the public sector. The study's main research instrument adopted a Likert scale with open-ended questions posed to the research participants. The pretest of the research instrument was conducted with 12 respondents drawn from both the counties and the Office of the Auditor-General. The results revealed that the study constructs were acceptable for adoption in the main survey. The findings established that a plan

for fraud control positively improved fraud detection and prevention. Further, a mechanism for reporting fraud and a policy of zero tolerance for fraud positively improved fraud detection and prevention among the counties. Spearman's rank correlation summary indicated that the relationship between the independent and dependent variables was strong in two policies (mechanism for reporting fraud and policy of zero tolerance for fraud) and was not as strong as projected on a plan for fraud control as a policy. The researcher attributes this to the fact that Kenya's devolved units were still in their infancy, with unclear policies and a lot of duplication from the national government.

The study's findings suggest that county government employees believe that fraud management policies are the most effective instruments for combating the threat of fraud. Cash reviews, discovery sampling, contractor contract reviews, audit committees, data mining, and a system for reporting fraud were all identified as policies being used to combat fraud in the counties. Only the method for reporting fraud was properly followed out of the six, with the others relegated to papers in county government sign boards. Many county governments were found to have no policy on effective fraud reporting, and a fraud control plan was merely hyperbole.

The first objective was to figure out how a fraud control plan could affect the severity and improve reporting of fraud cases among the Western Kenya County Governments. The study revealed that there was a moderately significant relationship between the two variables. The second specific objective looked at the contribution of mechanisms for reporting fraud toward minimizing the severity and improved reporting of fraud cases among the Western Kenya County Governments. According to the findings in Table 4.14, the coefficient on the IV1\_FraudReport\_Discipline is negative and relatively significant at the 5 percent level (coefficient = -0.870, z-value = -2.27). This means that the adoption of fraud reporting mechanism and the implementation of strict disciplinary measures for offenders helps in reducing the fraud case reported. The third specific objective looked at the role zero-tolerance to fraud policies play with regards to reducing the severity and improved reporting of fraud cases among the Western Kenya County Governments. According to the findings, a zero-tolerance policy for fraud increases fraud detection and prevention across Western Kenya County Governments, though not to the extent envisaged. Many

county governments were found to have no zero-tolerance standards for fraud or effective fraud reporting.

## **5.4 Recommendations**

This section provides recommendations for the county governments and the professional regulatory bodies in terms of policy and managerial implications.

### **5.4.1 Policy recommendations**

The study suggests that all the professional regulatory bodies, such as the Institute of Certified Public Accountants of Kenya (ICPAK), the Association of Certified Fraud Examiners (ACFE Kenya chapter), and the Institute of Internal Auditors (IIA), should include fraud management policies in their curriculum and training as a key requirement for full membership accreditation in their respective professions.

### **5.4.2 Managerial recommendations**

In light of the findings of this study, and in the interest of mitigating the severity and reporting of fraud cases in county governments and other state departments, it is suggested that the county governments strengthen their fraud management policies. In order to keep up with the worldwide trend in fraud detection and prevention, both the national and county governments should create a favorable environment for the implementation of fraud management policies to take root. This was due to the fact that the counties' leadership had implemented few fraud management policies in Western Kenya county governments.

### **5.4.3 Recommendations for further research**

The study's scope might be expanded to include additional Kenyan counties, including comparison studies to determine the role of fraud management **policies** in mitigating the severity and reporting of fraud cases in the public sector. While the study focused on fraud management **policies**, future

research may look at other relevant fraud control aspects to acquire a broader and more in-depth understanding of other factors that may be important for fraud detection and prevention success.

## **5.5 Limitation of the study**

The timeliness of the research, the scope of the study depending on time, and the limits of the numerous research methodologies and tools used are all limitations of this study.

### **5.5.1 Timing of the study**

First, the application of fraud management policies in mitigating the severity and reporting of fraud cases in the public sector. The study was conducted at the early stages when the various stakeholders are probably still learning about fraud management policies and their application. This may partially explain the lower-than-expected response rate of respondents in filling the questionnaire. However, the perspectives of the participants showed that they are aware of fraud management policies. Besides, the questionnaire design did not require prior knowledge and experience with fraud management policies. The feedback received from more than 70% of the preparers was sufficient.

### **5.5.2 The scope of the study based on time**

The data received from county governments and the Office of the Auditor-General was sufficient for analysis despite the short research period (one and a half months). The many diagnostic tests that assessed the strength of the various data models employed in the study corroborated this. If time allowed, a look at the effects of fraud detection and prevention techniques that were used before the adoption of fraud management policies by the counties would have enriched the study.

### **5.5.3 Limits of research methodologies and tools used**

The study used both physical and online self-administered questionnaires (to gather views from respondents), as detailed in Chapter Three on Research Methodology. Even though empirical studies have shown that these approaches are popular for conducting research, they do have limits,

and efforts have been made to reduce the impact of these constraints on the study's reliability and validity.

While the self-administered online questionnaire is efficient in that it can reach as many people as possible and allows for speedier responses, it has a major barrier in the form of low response rates. As a result, follow-up phone calls, emails, and reminders were used to boost participation. Those that have a no-participation policy or who refuse to participate faced a challenge. Several individuals, even at the time of writing, had not completed the questionnaire despite promises to do so. However, more than 60% of respondents completed the questionnaire, allowing inferences to be made.

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## APPENDICES

### APPENDIX 1: A LETTER OF INTRODUCTION

**Brian Omondi Onyango.**  
Strathmore University,  
Strathmore Business School  
P.O. Box 59857 – 00200,  
**Nairobi.**

**Dear Respondent,**

**RE: REQUEST FOR COLLECTION OF RESEARCH DATA.**

I am a master's student at Strathmore University – Strathmore Business School. I'm pursuing a Master of Commerce Degree with a specialization in Forensic Accounting.

I am currently conducting research on **Fraud management policies as a Tool for Fraud Detection and Prevention among Western Kenya County Governments.** This research is in partial fulfillment of the award of the master's degree. I humbly request your participation in this study.

I would like to assure you that all the information shared in this study was kept confidential and used solely for the purposes of this research. To ensure strict confidentiality, I respectfully request you not to write your name in the questionnaire. Your involvement and assistance in this study was hugely appreciated.

Yours sincerely,



**Brian Omondi Onyango**

## **APPENDIX 2: QUESTIONNAIRE TO THE COUNTIES AND OAG**

### **Introduction**

The goal of this questionnaire is to collect information on Fraud management policies as a Tool for Fraud Detection and Prevention. Your county was specifically chosen because it will provide valuable information to this academic study in answering its research questions. You are kindly asked to respond to the questions as directed. As stated in the introductory letter, this information was kept strictly confidential and used solely for academic purposes.

**(Kindly tick inside the box where appropriate)**

### **SECTION A: THE DEMOGRAPHIC PROFILE**

#### **1. Kindly indicate your organization**

County Government ☐

Office of the Auditor General ☐

#### **2. Kindly indicate your Gender**

Male ☐

Female ☐

#### **3. Kindly indicate your Job Occupation**

Forensic Investigator ☐

Accountant ☐

External Auditor ☐

Internal Auditor ☐

#### **4. Please indicate your highest level of education.**

Doctorate Degree ☐

Masters Degree ☐

Bachelor's Degree ☐

Diploma [ ]

Certificate [ ]

**5. Kindly indicate your professional certification**

CFE [ ]

CFA [ ]

CPA [ ]

ACCA [ ]

Others, specify .....

**6. Kindly indicate the number of years of Professional Experience**

1 - 5 [ ]

6 – 10 [ ]

11 - 15 [ ]

16 – 20 [ ]

Over 20 [ ]

**SECTION B: INDEPENDENT VARIABLE SUBDIMENSIONS**

**PLAN FOR FRAUD CONTROL.**

7. This section assesses the extent to which your county is involved in the implementation of the plan for fraud control. Please indicate your level of agreement with the statements below where

**(1) – Strongly Disagree, (2) – Disagree, (3) – Neutral, (4) – Agree, (5) – Strongly Agree**

No.	ITEM	Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SA)
01	Our county has an Integrated Macro-Policy that divides all tasks and responsibilities in the					

	county and clarifies who is responsible for dealing with fraud in each line.					
02	Our county has a fraud risk assessment plan that is intended to provide an up-to-date overview of the county regarding the risk of possible fraud.					
03	Our county has a community awareness program in place to create fraud awareness to employees and customers.					
04	Our county has a fraud reporting system that includes both external fraud disclosures and investigative procedures.					
05	Our county has a conduct and disciplinary standard that all county workers and other parties dealing with the county, such as contractors, subcontractors, consultants, and others, follow as anti-fraud values.					

Comments (If any) .....

.....

.....



## MECHANISMS FOR REPORTING FRAUD

8. This section assesses the extent to which your county is involved in the implementation of the mechanisms for reporting fraud. Please indicate your level of agreement with the statements below where (1) – **Strongly Disagree**, (2) – **Disagree**, (3) – **Neutral**, (4) – **Agree**, (5) – **Strongly Agree**

No.	Items	Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SA)
01	Our county has an effective mechanism for reporting fraud, which includes a system that hides the reporter's name.					
02	Our county has an effective fraud reporting system that is independent of the occurrence of fraud.					
03	Our county has excellent fraud reporting channels in place, with the goal of allowing reporters to submit reports via media that they consider comfortable.					
04	Our county has a robust reporting system in place that follows up on reports as soon as possible in order to avoid fraud from becoming more serious.					

05	There are policies in place in our county regarding the fraud reporter's immunity from disciplinary actions and litigation					
----	--	--	--	--	--	--

## **POLICY OF ZERO TOLERANCE FOR FRAUD**

9. This section assesses the extent to which your county is involved in the implementation of the policy of zero tolerance for fraud. Please indicate your level of agreement with the statements below where **(1) – Strongly Disagree, (2) – Disagree, (3) – Neutral, (4) – Agree, (5) – Strongly Agree**

<b>No.</b>	<b>Items</b>	<b>Strongly Agree</b> <b>(SA)</b>	<b>Agree</b> <b>(A)</b>	<b>Neutral</b> <b>(N)</b>	<b>Disagree</b> <b>(D)</b>	<b>Strongly Disagree</b> <b>(SA)</b>
01	Our county has an anti-fraud strategy that is based on a policy of integrity and zero tolerance for fraud.					
02	Our county government and management have a zero-tolerance attitude for fraud and have supported the establishment of an anti-fraud culture.					
03	Our county has devised an anti-fraud plan that takes into account the unique characteristics of its operations.					

04	Our county has made sure that the code of business ethics and corporate governance are in line with the anti-fraud policy, and that the powers and duties for fighting fraud are clearly stated.					
05	Our county has a model anti-fraud plan that takes into account the current state of the public sector in Kenya, as well as the causes of fraud, as well as the country's economic, legal, social, and cultural systems.					

## **SECTION C: DEPENDENT VARIABLE SUBDIMENSION**

### **FRAUD SEVERITY AND REPORTED CASES**

10. This section assesses the extent to which your county agrees with the assertion that the implementation of fraud management policies leads to a reduction in the reported cases of simple and complex fraud. Please indicate your level of agreement with the statements below where **(1) – Strongly Disagree, (2) – Disagree, (3) – Neutral, (4) – Agree, (5) – Strongly Agree**

No.	Items	Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SA)
01	The number of reported occurrences of fraud decreases during the introduction of fraud					

	management policies and increases slightly after the policy is no longer in operation.					
02	In our county, there was an increase in referrals for fraud during the post-zero tolerance times.					
03	In our county, the severity of fraud management policies, coupled with the administrative scrutiny on cases deterred some individuals from engaging in fraud.					
04	In our county, it was impossible to account for factors that might have influenced fraud caseloads, such as changing economic conditions, the end of a county leader's term, or administrative changes that might have affected cases.					

Comments (If any) .....

.....

.....

.....

**I APPRECIATE YOUR PARTICIPATION**

### **APPENDIX 3:        EMAIL TO RESPONDENTS FOR ONLINE QUESTIONNAIRE**

Dear... (Name of Respondent),

My name is Brian Omondi and I am currently pursuing my Masters Degree at Strathmore Business School, Strathmore University.

I am conducting research on Fraud management policies as a Tool for Fraud Detection and Prevention among the Western Kenya County Governments. The study is intended to inform the county governments and all the regulatory bodies, including the Institute of Certified Public Accountants (ICPAK) and the Institute of Internal Auditors (IIA).

I'm now using an online questionnaire to solicit comments from respondents involved in the implementation of fraud control policies. Your organization has been chosen for this study ....(Name of the organization).

Please complete the following form, and if you have any questions, please contact me at the above email address or by phone at 0728 981 319.

Please accept my heartfelt gratitude.

## **APPENDIX 4: PARTICIPANTS INFORMED CONSENT**

### **PARTICIPANT INFORMATION AND CONSENT FORM FRAUD MANAGEMENT POLICIES AS A TOOL FOR FRAUD DETECTION AND PREVENTION AMONG KENYAN COUNTY GOVERNMENTS**

#### **SECTION 1: INFORMATION SHEET**

**Investigator:** Brian Omondi Onyango

**Institutional affiliation:** Strathmore Business School (SBS)

#### **SECTION 2: INFORMATION SHEET – THE STUDY**

##### **2.1: Why is this study being carried out?**

The study is being carried out in partial fulfillment of the requirements for the degree of Master of Commerce at Strathmore University.

##### **2.2: Do I have to take part?**

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information on the specific inquiries. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

**2.3: Who is eligible to take part in this study?** The study targeted 451 respondents from the 11 County Governments and 3 respondents from the Office of the Auditor-General. These respondents are drawn from the departments of External Audit, Internal Audit, Accounts, and Forensic Investigation.

##### **2.4: Who is not eligible to take part in this study?**

Anyone who's not falling in the category highlighted in section 2.3 above.

##### **2.5: What will taking part in this study involve for me?**

You will be approached by the investigator (me) BRIAN OMONDI ONYANGO and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you

will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

**2.6: Are there any risks or dangers in taking part in this study?**

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

**2.7: Are there any benefits of taking part in this study?**

The information will be used to improve fraud control within your organization.

**2.8: What will happen to me if I refuse to take part in this study?**

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

**2.9: Who will have access to my information during this research?** All research records will be stored in securely locked cabinets. That information may be transcribed into our database, but this will be sufficiently encrypted, and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

**2.10: Whom can I contact in case I have further questions?**

You can contact me, BRIAN OMONDI ONYANGO at SBS, or by e-mail at [brian.onyango@strathmore.edu](mailto:brian.onyango@strathmore.edu) or by phone +254 728 981 319. You can also contact my supervisor, Dr. DAVID MATHUVA at the Strathmore Business School, Nairobi, or by e-mail at [dmathuva@strathmore.edu](mailto:dmathuva@strathmore.edu)

**If you want to ask someone independent anything about this research, please contact:**

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email [ethicsreview@strathmore.edu](mailto:ethicsreview@strathmore.edu) Tel number: +254 703 034 375

I, \_\_\_\_\_, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you.

**Participation in the research study**

[ ] I AGREE to take part in this research

☐ I DO NOT AGREE to take part in this research **Storage of information on the completed questionnaire**

☐ I AGREE to have my completed questionnaire stored for future data analysis

☐ I DO NOT AGREE to have my completed questionnaire stored for future data analysis

**Participant's Signature:**

\_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**DD / MM / YEAR**

**Participant's Name:**

\_\_\_\_\_ **Time:** \_\_\_\_ / \_\_\_\_

*(Please print name) HR / MN*

I, \_\_\_\_\_ (Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given the opportunity to ask questions which have been answered satisfactorily.

**Investigator's Signature:**



\_\_\_\_\_ **Date:** \_\_\_\_ **05** / \_\_\_\_ **05** \_\_\_\_ / \_\_\_\_ **2022** \_\_\_\_\_

**DD / MM / YEAR Investigator's Name:**

BRIAN OMONDI ONYANGO

\_\_\_\_\_ **Time:** \_\_\_\_ / \_\_\_\_

*(Please print name) HR / MN*



**APPENDIX 5: LIST OF COUNTY GOVERNMENTS IN THE SAMPLE**

<b>Code</b>	<b>County Name</b>	<b>Region</b>	<b>Area in Square KM</b>
041	Siaya	Nyanza	2,496
042	Kisumu	Nyanza	2,010
043	Homabay	Nyanza	3,155
044	Migori	Nyanza	2,586
045	Kisii	Nyanza	1,318
046	Nyamira	Nyanza	913
037	Kakamega	Western	3,034
038	Vihiga	Western	531
039	Bungoma	Western	2,207
040	Busia	Western	1,628
026	Trans Nzoia	Western	2,470

**Source:** GOK (2022)

## APPENDIX 6: FULL RESULTS FOR REGRESSION MODEL 1 – FRAUD DETERRENCE MODEL

```
. ologit DV1_Deterrance IV1_FraudReport_Discipline IV2_AntiFraudPlan_ZeroTolerance IV3_IndependentFraudReportSystem IV4_IntegratedMacroPolicy Gender Org
```

```
Iteration 0: log likelihood = -727.10985
Iteration 1: log likelihood = -685.17806
Iteration 2: log likelihood = -682.86183
Iteration 3: log likelihood = -682.85447
Iteration 4: log likelihood = -682.85446
```

Ordered logistic regression

```
Number of obs = 316
LR chi2(6) = 88.51
Prob > chi2 = 0.0000
Pseudo R2 = 0.0609
```

Log likelihood = -682.85446

DV1_Deterrance	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
IV1_FraudReport_Discipline	-.2164511	.3387995	-0.64	0.523	-.880486	.4475838
IV2_AntiFraudPlan_ZeroTolerance	-.7939664	.3089689	-2.57	0.010	-1.399534	-.1883985
IV3_IndependentFraudReportSystem	-2.769982	.499491	-5.55	0.000	-3.748966	-1.790997
IV4_IntegratedMacroPolicy	-6.49294	.9260287	-7.01	0.000	-8.307922	-4.677957
Gender	.535717	.2430949	2.20	0.028	.0592597	1.012174
Org	-.1532465	.3002022	-0.51	0.610	-.7416319	.4351389
/cut1	2.86964	1.217339			.4837001	5.25558
/cut2	4.438726	1.211468			2.064293	6.81316
/cut3	5.296764	1.210508			2.924213	7.669316
/cut4	5.438845	1.210134			3.067026	7.810664
/cut5	5.483825	1.21008			3.112112	7.855538
/cut6	5.552861	1.21025			3.180815	7.924907
/cut7	6.806424	1.218394			4.418415	9.194433
/cut8	6.907494	1.218699			4.518888	9.296101
/cut9	7.414583	1.223144			5.017265	9.8119
/cut10	7.616372	1.226254			5.212959	10.01979
/cut11	7.86579	1.230703			5.453656	10.27792
/cut12	8.330967	1.242615			5.895487	10.76645
/cut13	9.332017	1.269663			6.843523	11.82051

## APPENDIX 7: FULL RESULTS FOR REGRESSION MODEL 2 –FRAUD CASE REPORTING MODEL

```
. ologit DV2_IncreasedCaseReports IV1_FraudReport_Discipline IV2_AntiFraudPlan_ZeroTolerance IV3_IndependentFraudReportSystem IV4_IntegratedMacroPolicy Gender Org
> gradedMacroPolicy Gender Org
```

```
Iteration 0: log likelihood = -752.14339
Iteration 1: log likelihood = -566.98464
Iteration 2: log likelihood = -510.12952
Iteration 3: log likelihood = -502.05835
Iteration 4: log likelihood = -501.94466
Iteration 5: log likelihood = -501.9443
Iteration 6: log likelihood = -501.9443
```

Ordered logistic regression

```
Number of obs = 316
LR chi2(6) = 500.40
Prob > chi2 = 0.0000
Pseudo R2 = 0.3326
```

Log likelihood = -501.9443

DV2_IncreasedCaseReports	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
IV1_FraudReport_Discipline	-.8699496	.3840537	-2.27	0.024	-1.622681	-.1172181
IV2_AntiFraudPlan_ZeroTolerance	7.891063	.5786807	13.64	0.000	6.75687	9.025256
IV3_IndependentFraudReportSystem	-.5786788	.5565644	-1.04	0.298	-1.669525	.5121673
IV4_IntegratedMacroPolicy	-2.737033	.9244474	-2.96	0.003	-4.548917	-.9251492
Gender	-2.01918	.2864556	-7.05	0.000	-2.580623	-1.457738
Org	-.2034065	.3218641	-0.63	0.527	-.8342485	.4274356
/cut1	-4.771224	1.314892			-7.348364	-2.194084
/cut2	-2.603276	1.257175			-5.067293	-.1392587
/cut3	-1.802205	1.232246			-4.217363	.6129525
/cut4	-.8065741	1.22438			-3.206314	1.593166
/cut5	-.6883248	1.226518			-3.092255	1.715605
/cut6	.4442668	1.244054			-1.994034	2.882567
/cut7	1.506825	1.232482			-.9087963	3.922445
/cut8	1.997499	1.213288			-.3805023	4.3755
/cut9	3.071872	1.190572			.7383943	5.405349
/cut10	3.168069	1.190121			.8354748	5.500664
/cut11	3.907128	1.191002			1.572808	6.241448
/cut12	6.046689	1.221319			3.652947	8.440431
/cut13	6.26678	1.224513			3.866778	8.666782
/cut14	6.297686	1.224948			3.896832	8.69854
/cut15	8.103906	1.283171			5.588938	10.61887

## APPENDIX 8: LETTER OF ETHICAL APPROVAL TO CONDUCT RESEARCH



11<sup>th</sup> April 2022

Mr Onyango, Brian  
brian.onyango@strathmore.edu

Dear Mr Onyango,

**RE: Forensic Accounting Policies as A Tool for Fraud Detection and Prevention  
Among Kenyan County Governments**

This is to inform you that SU-IERC has reviewed and **approved** your above **SU Masters'** research proposal. Your application reference number is **SU-IERC1277/22**. The approval period is **11<sup>th</sup> April 2022 to 10<sup>th</sup> April 2023**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 48 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.






Yours sincerely,

for: **Dr Ben Ngoye,**  
**Secretary; SU-IERC**

**Cc: Prof Fred Were,**  
**Chairperson; SU-IERC**



## APPENDIX 9: PERMISSION TO CONDUCT RESEARCH FROM NACOSTI

 <b>REPUBLIC OF KENYA</b>	 <b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b>
Ref No: <b>128224</b>	Date of Issue: <b>22/April/2022</b>
<b>RESEARCH LICENSE</b>	
	
<b>This is to Certify that Mr.. Brian Omondi Onyango of Strathmore University, has been licensed to conduct research in Bungoma, Busia, Homabay, Kakamega, Kisii, Kisumu, Migori, Nyamira, Siaya, Transnzoia, Vihiga on the topic: Forensic Accounting Policies as a Tool for Fraud Detection and Prevention among Kenyan County Governments for the period ending : 22/April/2023.</b>	
License No: <b>NACOSTI/P/22/16994</b>	
<b>128224</b>	
Applicant Identification Number	Director General <b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b>
	Verification QR Code
	
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