ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES

The Role of Forensic Accounting in Ethiopia Against Governmental Enterprises Fraud

A Thesis Submitted to St. Mary's University, School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of MBA In Accounting and Finance

By: Bersabeh Getu

June,2023

Addis Ababa, Ethiopia

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Approved by Board of Examiners

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ENDORSEMENT

This thesis(The role of forensic accounting in Ethiopia against governmental enterprises fraud) has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a University advisor.

_____   _____

Simon Tareke (Asst. Prof.) Signature & Date

DECLARATION

I, Bersabeh Getu, do hereby, declare that the role of forensic accounting in Ethiopia against governmental enterprises fraud is my original work and that it has not been submitted partially; or in full, by any other person for an award of degree in any other person for an award of degree in any other university institution.

Submitted By:

Full Name:Bersabeh Getu

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Approved By:

This thesis has been submitted for examination with my approval

Full Name: Simon Tareke (Asst. Prof.)

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Abstract

The role of forensic accounting in Ethiopia against governmental enterprise fraud has been assessed in this study. Its goal was to evaluate the role of forensic accounting in internal control systems, as well as to evaluate the misconduct on the idea of forensic accounting and the forensic accounting procedures and techniques. Descriptive research design was adopted in the study. A mixed research technique was used, combining qualitative and quantitative data to create a holistic picture. Ten Addis Ababa-based government businesses made up the study's sample population. The population was sampled in order to choose respondents using the convenience sampling approach. Data from the corresponding departments are gathered using both primary and secondary data sources. Both questionnaires and interviews served as data sources. SPSS was used to examine the primary data that was gathered from respondents. The results of this study demonstrated that forensic accounting procedures and techniques used by governmental organizations favorably contribute to the identification, avoidance, and support of real fraud investigations. There are additional elements that contribute to the identification of shortcomings in the application of forensic accounting procedures. Some examples include the loose application of internal control rules and procedures, inconsistent training, and a lack of effective deterrents. In order to fight fraud in the public sector, it is advised that stringent controls be used, consistent training be given, and strict punitive measures be used.

Key words: Forensic accounting, Fraud, Internal control, Punitive measures

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List of Acronyms

AICPA	American Institute of Certified Public Accountants
CAR	Computer assisted review
CFF	Certified Financial Forensics
CIMA	Chartered Institute of Management Accountants
CPI	Corruption Perceptions Index
EFCC	Economic and Financial Crimes Commission
EFCs	Expected Family Contribution
EFFC	European Federation of Foundation Contractors
EU	European Union
FC	Financial Crime
FFR	Fraudulent financial reporting

FATF	Financial Action Task Force
ICPC	Independent Corrupt Practices Commission
INCOSAI	International Conference of Supreme Audit Institutions
IT	Information Technology
ML	Money Laundering
SAS	Statement of Auditing Standard
SPSS	Statistical Package For The Social Science
SEC	Securities and Exchange Commission
TI	Transparency International
US	United states of America
WB	World Bank

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

According to Unacademy (2023) public sector enterprises are businesses owned and controlled by the government. The government either wholly or partially owns the enterprises. These enterprises help the government participate in the economic activities of the country. The Central or the state governments can manage public Sector Undertakings .The role of pubic sector in Ethiopia is reflected in the amount of money they command and the extent to which the economy is dependent on them. Electricity, telecommunications, shipping & logistics, transportation, and other essential services are mainly, if not entirely, provided by public corporations (Copley, 2022).

Ethiopia is not listed by the US as a Country of Primary Concern for ML & FC, and was removed by FATF in 2019 and by the EU in 2020 from so called "Grey" lists. Concluded in 2016, identifying 23 criminal activities as a major source of illicit money, with highest threats coming from human trafficking and migrant smuggling, corruption, goods smuggling (contraband), illegal hawala, fraud & tax evasion. The 2019 Transparency International (TI)

Corruption Perceptions Index (CPI) puts Ethiopia as 96th out of 180 countries, with a score of 37 out of 100 . This rating shows a slight improvement from the 2018 CPI, in which Ethiopia ranked 114/180 countries and scored 34 /100. A score below 50 is indicative of a country struggling with corruption issues.

 Financial crimes such as embezzlement, bribery, bankruptcy, security fraud (EFCC, 2004), among others, have taken the centre stage in the scheme of things; and on the scale of governmental preference. Quite unfortunately, too, is the inability of the statutory auditor constrained by the relevant statutes and standards, to deal with financial crimes (Uwojori and Asaolu, 2009).In response to a closer examination of the economic and financial actions of shareholders and government agencies, Kahan (2006) highlighted that ongoing research has proven a significant desire for institutions and nations to avoid and detect these economic and financial crimes.Due to the high frequency of frauds, forensic accounting was developed (Modudgu & Anyaduba, 2013; Ozkul & Pamukcul, 2012).

According to a study by Imoniana, Antunes, and Formigoni (2018), 42% of firms have expressed a need for forensic accountants as a result of the sharp rise in fraud and related economic crimes. Popoola, Che-Ahmad, and Samsudin (2014) claim that forensic accountants are educated to see beyond the numbers and deal with the truth of the situation.

Forensic accounting methods are suggested to be among the effective techniques in identifying and deterring fraudulent practices and corruption. Forensic accounting is a science dealing with the application of accounting facts and concepts gathered through auditing methods, techniques and procedures to resolve legal problems which requires the integration of investigative, accounting, and auditing skills (Arokiasamy & Cristal, 2009; Dhar & Sarkar, 2010).The size and complexity of accounting services and the inability of the statutory auditors further constrained by the related clauses in the company laws and standards, present very visible and poor show of the fight against financial crimes in corporate organizations.

The expertise and abilities required to combat these economic and financial cankers are said to be possessed by forensic accountants. Thus, it is crucial to look at how forensic accounting is used and how to counteract EFCs. This led the American Institute of Certified Public Accountants (AICPA) to predict that there would be a large need for fraud accounting specialists in the upcoming years and to establish Certified Financial Forensics (CFF) to

improve the skill of Certified Public Accountants (AICPA & CIMA, n.d.). Although while auditing can sometimes reveal economic and financial crimes, full exposure of these crimes and their punishment require specialized skills, which forensic accounting is said to offer. Hence, this paper tries to distinguish the role of forensic accounting in Ethiopia against governmental fraud.

1.2 Statement of The Problem

According to a World Bank study conducted in Ethiopia, corruption is the most difficult challenge that all households encounter, second only to poverty (WB, 2005). Corruption is considered to have undermined the legitimacy of governments and weakened their structures, limiting productivity, impeding growth, exacerbating poverty, marginalizing the poor, causing social discontent, and ultimately hastening their demise under the Imperial and Dergue Regimes (Tesfaye,2007).

TI CPI- 2019 Transparency international (TI) corruption perception index ranks Ethiopia as 96th out of 180 countries, with a high corrupt score of 37 out of 100. Given this the phenomenon of fraud in the Ethiopian public sector is a severe problem that necessitates a more sophisticated approach to detection and prevention measures. Forensic accounting is a new method that is presently commonly utilized to detect and prevent fraud. According to Hansen (2009), the best instrument for detecting and investigating fraud is forensic accounting. Degboro and Olofinsola (2007) define the use of forensic accounting methodologies as criminal, as well as the combination of investigative accounting operations with legal processes for discovering fraud.

According to Ajie and Ezi (2000), traditional auditing and investigation was inadequate in the identification and prevention of the many forms of frauds, which is why frauds are so common in modern enterprises. Forensic auditing is created as a solution to deal with financial fraud as a result. In this sense, those who establish accounting standards have enhanced the measures that auditors are required to take in order to uncover fraud and reestablish public confidence in the audit profession. Auditor compliance with SAS No. 99 rules is presently mandated as a result of the catastrophes caused by Enron and World Com (Chui and Pike, 2013).

According to Williams (2002), forensic accounting is acknowledged as having a certain type of professional skill and equipped with distinguishable characteristics, including logic, objectivity, and independence. A unique social awareness that forensic accountants possess is important for translating economic concerns into symbolic acts of confidence. The symbolic ability through which the translation is achieved is the crucial social asset that forensic accountants possess.

Dr. Chesoli(2020), studied the role of forensic accounting as a tool in the fight against Financial Crimes in Kenya. The study employed a purposive sampling technique. The finding shows forensic accountant in fighting crimes and corruption, has a better advantage within his distinct functions or roles performed compared to the regular auditor.

The efficiency of forensic auditing in examining, identifying, and preventing fraud in governmental bodies was examined by Kebede (2016). The study used a technique called purposive sampling. The findings showed that efficient forensic auditing procedures have a significant influence on identifying and investigating fraud. This outcome also shown that frauds are not minimized or prevented as a result of forensic auditing's efficacy.

There is lack of research in this particular study area in Ethiopia.In light of the aforementioned issues,this paper aims to assess the role of forensic accounting in Ethiopia against governmental enterprise fraud.

1.3 Objectives of the Study

1.3.1 General objective:

The study's goal is to asses the role of forensic accounting in Ethiopia against governmental enterprise Fraud.

1.3.2 Specific objective:

- To assess the role of forensic accounting on internal control system on governmental enterprises in Ethiopia .
- To assess the malpractice on the concept of forensic accounting by governmental enterprises in Ethiopia.
- To assess the forensic accounting processes and techniques that are used by governmental enterprises in Ethiopia.

1.4 Research Questions

The researcher has developed the following fundamental research questions in response to the problem indicated above.

1. What are forensic accounting roles on Internal Control Systems in government organizations?
2. What methods and techniques of forensic accounting are used in the government organizations?
3. What is the governmental organization thought on malpractice of the concept of forensic accounting?

1.5 Significance of the Study

This study will try to show how forensic accounting provides many benefits such as enhancing operational efficiencies, protecting an organization's reputation. And also show how forensic accounting can also prove essential in the examination of financial processes geared toward identifying solutions or detecting problems that otherwise may go and remain unnoticed. It hlp

It helps to show Forensic audits role in deterrent potential corruption and/or employee misconduct where the results of such engagements can assist management in developing future action plans to help prevent, detect and deter fraud throughout the organization. Furthermore this study would be used as a source of inspiration for further research and narrows the gap of the literature in this research topic.

1.6 Scope and Limitations of the Study

An estimated 55,000 social enterprises operate in Ethiopia, the second-most populous country in Africa and fastest growing economy in the region where about a quarter of 109 million people live below the poverty line, according to the World Bank. Due to the difficulty of

addressing all, the mixed research approach used, and its nature of recombining content, expense, and time requirements, the study's scope only includes ten governmental entities that are located in Addis Abeba.In this sense, the researcher restricts the study to just ten organizations where she can quickly obtain data in a group setting. This is done by seeing how the Internal Audit and Risk and Compliance Management department unit responds when dealing with fraud and related problems. Due to the inaccessibility of sensitive and important data, secondary data is also not included, making it impossible to fully evaluate the study's overall effects. It was not possible to refer to documents that needed to be reviewed, such as sample fraud case analyses, protocols, and detailed guidance on how to handle both suspected and real cases.

1.7 Operational Definition of Terms

Public sector: Wegrich, K. (2023), the part of an economy that is controlled by the state.

Forensic accounting: Hopwood, et al. (2008), the application of investigative and analytical skills for the purpose of resolving financial matters in a manner that meets the standards required by the court of law is forensic accounting.

Forensic accountant: Crumbley and Apostolou (2005), describes a forensic accountant as someone who can see the face behind the mask, have a suspicion (assume that) no documents or shown may not match what actually.

1.8 Organization of Study

The purpose of this research is to investigate the role of forensic accounting in Ethiopia against governmental enterprise Fraud. This paper is organized into five sections. The first chapter is an introduction part that outlines the study's context and then provides a brief overview of the issue statement. Following the discussion of the problem statement, research questions, general and particular objectives, importance, scope, and limitations of the study, and organization study are discussed. The review of related literature is presented in the second chapter. This component of the study presents a thorough theoretical and empirical notion of the proposed study as well as the identified research need.

The third chapter describes the research methods that is used in this study. It specifies the study concept, technique, and method that will be adopted. The data source and kinds, data collecting instruments, population, sampling process and sample, and data analysis method are all going to be described in the study approach.

In chapter four of this study, results of the data collected from respondents of the respective organisations is putted here. The researcher presents, discusses and analyzes the data and findings. Lastly, in the fifth chapter the summary of findings, conclusions and recommendations is given based on the analysis made. This study finally comprises the list of references used by the researcher, the tools that was used for collecting data which are questionnaire and interview questions will be attached.

CHAPTER TWO
Literature Review

Kautilya, in his classic treatise "Arthashastra" put down approximately 300 BC, portrayed a highly graphic description of what we, in our times, label as 'fraud'. "What is realized earlier is entered later on; what is realized later is entered earlier; what ought to be realized is not realized; what is difficult to realize is shown as realized; what is collected is shown as not collected; what has not been collected is shown as collected; what is collected in part is entered as collected in full; while what is entered is of another sort," writes Kautilya.

People have a visceral reaction to fraud. It is a violation of our right to demand fair treatment from our fellow humans. Aside from that, it is a setback to our self-image as astute managers capable of thwarting or discovering a fraudulent plan. Nobody wants to be misled, whether it's due of morals or vanity. Many aspects of contemporary civilization are concerned with

preserving a level playing field. To discourage, identify, and punish fraud, laws are made; enforcement agencies are created; police are employed; ethics and morality are taught in schools and learnt in companies; and offenders are punished by confiscation of their ill-gotten assets and personal liberty. The auditing profession arose from society's need to ensure fair and accurate dealings in trade and government.

2.1 Fraud in Historical Perspective

For thousands of years, some sort of fraud has been a part of commerce. The problem of fraud is addressed directly in Hammurabi's Babylonian Code of Laws, which dates from around 1800 B.C.E.: "If a herdsman, to whose care cattle or sheep have been entrusted, be guilty of fraud and make false returns of the natural increase, or sell them for money, then he shall be convicted and pay the owner ten times the loss (The Code of Hammurabi). ". The first legislators were also the first to notice and battle fraud.

While a "royal auditor" role existed in Britain as early as the 1400s, and British financiers shipping colonists to America utilized accountants, auditing became more official in the United States and Britain with the modification of the British Companies Clauses Consolidated Act in 1845. This act's provisions permitted outside professional auditors to help in shareholder audits (Flesher, 2005). In the early 1900s, the focus of accounting and auditing was on removing fraud and deception from financial accounts. The editor of the Journal of Accountancy invited public accountants to report the outcomes of their professional experience in 1906. (Johnson, 1906). He mentioned that these experiences would bring up points of practice that would be useful to the profession's members.

Himmelblau (1933), Tirrell (1936), Brady (1938), and Greeley (1938) all examined auditors' responsibilities to third parties in the late 1930s. Tirrell (1936) outlined the 1935 SEC guidelines that required financial filings to include complete disclosure of income items. Brady (1938) observed that, following the Ultramares vs. Touche fraud case in 1931, incorrect certification of fact was a sufficient foundation for finding fraud responsibility. Another incidence of fraud occurred towards the end of the decade, when McKesson & Robbins misrepresented their financial accounts. Following the McKesson controversy, Seidman (1939) claimed that internal controls and the use of outside auditors were the only ways to prevent fraud.

There were demonstrations of the development and application of statistical techniques for auditing by the 1950s (Vance, 1951). Moving on to the 1960s, several authors (Fess, 1963; Chaps, 1966; Blake, 1967; Simon, 1965) examined balance-sheet fraud. Altman (1968) was

one of the first to publish a research that employed a statistical model (particularly, discriminant analysis) to forecast bankruptcy, using financial factors generated through balance-sheet analysis.

Several research have demonstrated the applicability of these decision models and expert systems for fraud detection and internal control ((Lenard and Alam, 2004; Lenard, 2003; Bell and Carcello, 2000; Whitecotton and Butler, 1998; Eining, Jones, and Loebbecke, 1997; Bonner, Libby, and Nelson, 1996; Hansen et al., 1996; Persons, 1995; Bell, Szykowny, and Willingham, 1993; Pincus, 1989). internal control has become part of the audit with the issuance of the Statement of Auditing Standard (SAS) No. 78 (Auditing Standards Board, 1995).

Coram et al. (2010) stressed on the importance of effective internal audit function as part of the framework of internal control to fight fraud. Their study suggested that organizations with an internal audit function are more likely to detect and self-report fraud through misappropriation of assets than those that do not. The results also highlight the importance of having an in-house internal audit function which is found to be more effective in detecting and self-reporting fraud than when the internal audit function is fully outsourced. Generally, the establishment of internal control is effective, particularly to prevent individuals from committing a fraudulent act. However, such preventive control will be less efficient when there are collusion and management override. In this circumstance, tone at the top, an open, transparent corporate culture, and opportunity for reporting inappropriate behavior are much more effective (Trompeter et al. 2013).

2.2 Fraud Triangle Theory

Fraudulent financial reporting (FFR) occurs when senior management deliberately misrepresents underlying economic realities in order to further their own economic interests. Over time, the auditing industry has evolved its own set of techniques to uncover such misrepresentations and guarantee that financial statements adhere to widely accepted accounting rules. However, when big fraudulent activities have gone undetected by auditors, the SEC and the US Congress have frequently augmented these criteria with new restrictions (Baker et al., 2006). Furthermore, accounting practitioners and scholars have developed a variety of decision models to assist in the identification of fraud.

Donald R., cited by Tuanakotta Cressey (2010), developed a classical model to explain occupational offenders or perpetrators of fraud in connection with the working hypothesis that the last person who is believed to be violators of confidence when he sees himself as a person who has financial problems that cannot be told to anyone else, aware that this problem can be secretly resolved by abusing his authority as a holder of trust in the financial sector, and the day-to-day.

Cressey's Fraud Triangle

Source: Ernst & Young
(Cressey, D.R. 1953)

Fraud Triangle shows that someone did fraud based on 3 factors, namely:

1. Pressure: Cressey believes that the perpetrators of fraud are motivated by the pressure he is under. Performers have urgent financial needs that no one else is aware of. The crushing pressure of his life (the need for money) is an important concept, but he cannot share it with others.

2. Opportunity: Culprits of fraud believe they have the possibility to commit the crime without anyone noticing. According to Cressey, the perception of opportunities has two components. The first is general information, which is the understanding that the position of trust or confidence can be violated without repercussions. This information can be gleaned from what he heard or saw. The second requirement is a technical skill or expertise / skills to carry out the fraud.

3. Rationalization or seeking justification: prior to committing fraud rather than after. Justification is the part that must be a crime in and of itself, even if it is part of the perpetrator's motivation.

2.3 Forensic Accounting and Fraud

In criminal law, fraud is intentional deception made for personal gain or to damage another individual. Defrauding people or entities of money or valuables is a common purpose of fraud.

Fraud is defined as 'a legal concept, which involves acts of deceit, trickery, concealment, or breach of confidence that are used to gain some unfair or dishonest advantage; an unlawful interaction between two entities, where one party intentionally deceives the other through the means of false representation in order to gain illicit, unjust advantage.' (XVI International Conference of Supreme Audit Institutions (INCOSAI) Uruguay, 2000).

The term "forensic" has always been associated with the grim realm of forensic medicine. It brings up pictures of forensic pathologists, beaten bodies, blood-splattered tools at crime scenes, and autopsy and post mortems. Nothing could be more incorrect. Forensic accounting and forensic pathology share just one thread. The pursuit of evidence that will withstand the intense examination required by the rules of evidence and procedure for admission as evidence before the courts is that common denominator. Indeed, the term 'forensic' as defined in Webster's Dictionary means 'belonging to, used in or suitable to courts of judicature or to public discussion and debate'.

The integration of accounting, auditing and investigative skills yields the specialty known as forensic accounting to investigate and identify financial crimes and other economic malpractices, forensic accounting is defined by Al Samara, AL Afeef, and Al Ali (2017) as the use of criminal method and incorporation of investigative accounting operations and legal processes. Forensic accounting, according to Zysma (2004), is the fusion of auditing, accounting, and investigative abilities. Legal matters benefit from forensic accounting since it provides the highest level of certainty (Blessing, 2015). According to Abdullahi and Mansor (2015), forensic accounting is the use of accounting and investigative abilities at a level deemed acceptable by the appropriate court to address contentious matters in both civil and criminal litigation.

Forensic audit in its present state can be broadly classified into two categories as under.

1. encompassing litigation support and
2. Investigative accounting.

2.4 Forensic Audit Techniques

It is difficult to detect fraud, especially fraud involving major financial statement misstatements, which occur in just around 2% of all financial statements. Fraud is typically disguised and happens as a result of collaboration. Documents supporting missing transactions are typically not kept in business files. To support fraudulent transactions, false paperwork is frequently manufactured or legal records are changed. While fraud detection techniques cannot detect every fraud, they can raise the possibility that misstatements or defalcations will be identified on time.

According to Ansari (2005), the reactive technique focuses on the investigation of allegations of economic and financial crimes. The submitted allegations are confirmed or refuted by collecting and submitting substantive evidence.

There are two main methods used in the literature to detect fraud: supervised and unsupervised.

1. Supervised method

   Classification (or supervised) procedures are the most often employed research approach. Supervised approaches make use of previous knowledge (also known as labeled information) that comprises both valid and suspect data.

   Unsupervised methods do not require labeled data, whereas supervised approaches must. A database of known fraudulent or genuine instances is utilized to develop models in the supervised technique.to identify deception (Bolton and Hand 2002). The models are trained using previously labeled data, and then they are used to differentiate between fraudulent and genuine transactions. These procedures are based on the assumption that the fraud trend in the future will be the same as it has been in the past. Recent research has seen the adoption of supervised neural network models (Bolton and Hand 2002; Kou et al. 2004; Phua et al. 2005).

   A major concern in fraud prevention/detection research is that models may work only for the data that is used in creating the models. The generalize ability of fraud profiles is highly dependent on the context of the original model development and on the target environment. For example, if new data comes into the dataset, those models may not work due to either over-fitting to the training dataset or unknown fraud types. In addition, the robustness of models is a major concern during extension, re-utilization, and adaptation. Considering that fraud perpetrators adapt to find loopholes in an enterprise's current fraud prevention/detection system, this can be a critical

weakness. In order to adapt to unknown types of attacks, it is important that the systems should be dynamically extendable and adjustable. Finally, supervised approaches suffer from unequal class sizes of valid and fraudulent observations. In general, the number of fake observations far outnumbers the number of authentic ones. Approximately 0.08% of all yearly observations are fake (Hassibi 2000). In other words, even if a model accurately identifies all fraudulent transactions as legal regardless of their real identities, the model's error rate (the number of correctly classified transactions divided by the total number of transactions) is extremely low, which might be deceptive.

2. Unsupervised method

Unsupervised approaches have gotten significantly less attention than supervised methods in the literature. Unsupervised approaches use data-mining tools to discover changes in behavior or unexpected transactions (i.e. outliers). The detection of anomalies/outliers in data is the identification of patterns that do not conform to expected behavior (Chandola et al. 2009). The primary benefit of unsupervised approaches is that they do not require labeled data, which is sometimes unavailable owing to censoring (Bolton and Hand 2002; Kou et al. 2004; Phua et al. 2005). The results are not made public in order to protect an enterprise's competitive edge or for public benefit (Little et al. 2002).

Unsupervised approaches have gotten significantly less attention in the literature than supervised methods. Unsupervised approaches use data-mining techniques to discover changes in behavior or unexpected transactions (i.e. outliers). Anomaly/outlier detection is the discovery of patterns in data that do not conform to anticipated behavior (Chandola et al. 2009). The main benefit of unsupervised approaches is that they do not require labeled data, which is sometimes unavailable owing to censoring (Bolton and Hand 2002; Kou et al. 2004; Phua et al. 2005). The results are not made public in order to preserve an enterprise's competitive edge or for public benefit (Little et al. 2002).

Unsupervised method results are not concrete evidence that flagged transactions are fraudulent. Instead, the goal of unsupervised approaches is to notify analysts that flagged transactions are more aberrant, prone to mistake or fraud, depending on their experience, analysis, and assumptions. To put it another way, a flagged transaction

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might be lawful, a mistake, or fraudulent. This is certainly not the case with supervised techniques, where the outputs are either legal or false. An outlier can emerge as a result of a mistake, as Jans et al. (2009) explained (i.e. unintentional errors). Unsupervised methods are said to consider more causes than supervised ones.

In current digital age, forensic accounting employs a wide range of investigating techniques. Data mining software, data analysis software, and tools used by hackers are all examples. Forensic computing is the process of locating, conserving, evaluating, and presenting digital evidence in a court of law in a lawful way. Here are some of the forensic accounting tools.

1. Helix
2. ACL Desktop
3. Ultra Block
4. Advance Hash Calculator
5. Password Kit Forensic

2.6 Ethical Responsibilities of forensic accountants

Forensic accountants/auditors possess a particular social recognition, observation that is critical to the translation of economic issues into symbolic displays of trust (Williams, 2002).Despite this a forensic accountant may encounter a variety of different ethical threats. These threats include, adverse interest, advocacy, familiarity, management participation, self-interest, self-review, and undue interest. Forensic and valuation services professionals are required to follow various authoritative standards for professional responsibilities and ethics.

Accounting standard setters have expanded the actions auditors are supposed to take in order to detect fraud in an effort to rebuild public faith in the audit profession. Auditor compliance with Statement on Auditing Standards (SAS) No. 99 standards is now mandated as a result of the Enron and World Com scandals (quoted in Chui and Pike, 2013). In an effort to restore the public's confidence in the audit profession, accounting standard-setters have also increased the steps auditors are required to take in order to detect fraud. As a result of the Enron and World Com scandals, auditor compliance with Statement on Auditing Standards (SAS) No. 99 standards is now required (cited in Chui and Pike, 2013).

According to Messier, Glover, and Prawitt (2008), the auditor is under no obligation to prepare and carry out the audit in a way that would provide a reasonable level of assurance

that any mistakes or fraud-related misstatements that are immaterial to the financial statements will be found.

2.7 Empirical Review on Related Literature

Numerous empirical studies on forensic accounting and fraud detection and prevention reveal that forensic detection can be used as a tool to deter fraud Evidence indicates a connection between forensic accounting and fraud detection. The studies listed below describe the methodology, sample size, and main findings of these studies.

In Bangladesh, the study focused on issues related to the current state of forensic accounting application and how effectively it works as a fraud detection tool. They noted that forensic accounting, as a fraud detection tool, is relevant to efforts in Bangladesh to combat fraud and corruption. It was discovered that forensic accounting is now one of the strategic tools for managing varieties of corruption (Islam, Rahman and Hossan, 2011).

Jacob (2021) investigated the impact of forensic accounting on the management of financial fraud in Nigeria's public sector. The study collected primary data through a well-structured questionnaire administered to 250 respondents from the EFFC, ICPC, Office of the Accountant General, Office of the Auditor General, and other practicing accountants in the country. The questionnaire data was analyzed using descriptive statistics and regression analysis. According to the study's findings, forensic accounting practices have a positive effect on fraud management. Furthermore, the study discovered that forensic accounting has a significant impact on fraud detection and prevention, and that forensic litigation has a significant positive impact on the recovery of funds lost due to fraud.

The effect of forensic accounting on fraudulent practices in the Nigerian public sector is investigated by Akani and Ogbeide (2017). The survey descriptive research design was used in the study. All public institutions in Edo State, Nigeria, were included in the study population. The study selected ten (10) government establishments, both federal and state-owned, at random. The study collected data from respondents who were mostly internal auditors, chief accountants, executive directors, and directors of the selected institutions using a Structured four-scale Likert-type questionnaire. The frequency counts and simple percentages methods were used to analyze the study data. According to the study's findings, forensic accounting had a significant impact on reducing fraudulent practices in the Nigerian public sector.

Hashem (2020) investigated the role of forensic accounting approaches in detecting non-numerical fraud risk variables in manufacturing businesses listed on the Amman Stock Exchange. The study suggested that chartered accountants be made more aware of the importance of using forensic accounting techniques. Furthermore, motivating them to use forensic accounting techniques to detect any fraud practice, and concluding that all independent variables of forensics play a significant role in detecting fraud risk factors.

Okoye, Nwoye, Akuchi, and Onyema (2020) investigated labor fraud detection techniques in the Nigerian state of Anambra. According to the study's findings, there are no widely accepted forensic investigation techniques for detecting fraud in the public sector, and there is a positive and significant relationship between forensic accounting methods and fraud detection.

Singal, Nagi, and Goyal (2019) explain the Indian perspective on the effectiveness of fraud prevention strategies, recommending adherence to management policies as a remedy to curbing incidences of fraud in the public sector rather than forensic accounting methodologies. The study gathered responses from thirty (30) public sector organizations and discovered that significant internal control flaws in the institutions aided the occurrence of repeated frauds. In respect to investigation of the effectiveness of fraud prevention strategies in Saudi Arabia, Hakami and Rahmat (2018) focused on the impact on the public sector. The study used a survey research design methodology, with an administered structured questionnaire as the instrument, to collect responses from 150 employees of the country's twelve (12) commercial banks. The study examined different strategies for decreasing the likelihood of frauds from the perspectives of pressure, opportunity, and rationalization provided by perpetrators. However, the study concluded that ongoing education and positive employee recognition were the most important tools for ensuring the success of fraud prevention measures.

A research on the efficiency of forensic auditing in investigating into, identifying, and preventing fraud in public enterprises was conducted (Kebede, 2016). Purposive sampling was employed by the researcher to choose samples from the public while using a survey methodology. Data from both primary and secondary data sources were gathered through an examination of pertinent documents and survey questions. to put theories to the test, to

examine, and to interpret; descriptive statistics. The F-test, T-test, Pearson's product-moment correlation, and basic linear regression were all applied. Data from the survey were analyzed using the SPSS software suite. The efficacy of forensic auditing has an impact on the link between investigation and detection, according to the findings.

The research results identified that the use of forensic accounting practices reduces the incidences of fraud in the sampled institutions, and thus recommended the continued use of forensic professionals to monitor, investigate, and deter frauds.

2.8Summary on Research Gap

The empirical studies by various researchers stated above showed the use of forensic accounting in fraud detection and prevention and efficiency of forensic auditing. These studies were conducted in Nigeria, India, Saudi Arabia, Bangladesh and one study was conducted in Ethiopia. Forensic accounting study area lacks a research done in Ethiopia. The above stated by kebede as stated earlier was on the effectiveness of forensic auditing in investigating, detecting and preventing fraud in the public entities of Ethiopia. As it implied the study tries to show a change which is a result or consequence of an action or other cause. Therefore, this study regards the ideas stated to fill the gap the other researchers did not observe and cover by studying what is forensic accounting part in a play against public sector fraud.

2.8 Forensic Accounting and Internal Control

Internal control failings have been uncovered to be an influential contributing factor in a scam during this whole investigation (Jahmani and Niranjan, 2015: Shashkova, 2018). Inadequate surveillance and a lack of paper documentation are two examples of weak internal controls categorized for most of the profession, both of which enable fraudsters to misappropriate company cash. This is amplified if the deception stood precisely planned and included staff cooperation (Chen et al,. 2018, Shashkova, 2018).

Solid internal controls characterized for most procedures include substantial and robust control against badly composed sheet documents, both of which deter scammers from misusing corporate cash. This is amplified if the fraud is well-planned and incorporates staff involvement (Luikko, 2017: Sahdan et al,. 2020).

Internal control effectiveness leads to the avoidance of fraudulent activity and businesses that report false accounting reports. Many different procedures, guidelines, and projects are used to better protect funds, prevent fraud, and ensure that financial information is precise and authentic. Internal control must be performed correctly in order to avoid fraud. To avoid using them, a company should develop and implement internal control proposals (Luikko, 2017: Chen et al,. 2018).

A few reports from Ethiopia's Ethics and Anti-Corruption Commission also show that corruption is still a significant issue that needs to be addressed. Nowadays, corruption is happening more dramatically than anyone could have predicted. Land administration, tax and revenue, the court system, telecommunications, procurement, licensing regions, and the financial industry, among others, are susceptible to corruption.

The Federal Auditor General's office aims to conduct financial, performance, environmental protection, control, special, and other audits of federal offices and organizations. It also works to strengthen and develop the accounting and auditing professions by working with relevant organizations. Finally, it offers professional assistance and advice to federal, regional, and state civil servants and groups involved in accounting and auditing. The office has a duty to audit or cause to be audited the accounts of the federal government offices and organizations.

The auditor general is required to research and assess the dependability of internal controls when determining the scope and extent of the audit in accordance with the Generally Accepted Government Auditing Standards. These internal controls may include work organization, task segregation, physical security measures, authorization and approval, arithmetical and accounting procedures, effective staff training, supervision, and management. A particularly strong deterrent against possible perpetrators of economic and financial crimes is the auditor general's audit approach, which includes processes to assess the efficiency and dependability of the relevant institution's internal controls and to report thereon.

CHAPTER THREE

Research Methodology

The purpose of this chapter is to present the underlying principles of research methodology and the choice of the appropriate research method for the thesis. A research technique, according to Griffin (2010), must explain technical methods in a manner that is suitable for the audience.

3.1 Description of Study Area

This study was conducted in Addis Ababa city in particular reference to governmental enterprises. An estimated 55,000 social enterprises operate nationwide. Due to limited time, budget and accessibility of data the general location of the study was conducted in Addis Ababa, Ethiopia.

3.2 Research Design and Approach

Descriptive research is a type of research that is used to describe the characteristics of a population. As stated by Sahin and Mete (2021), It collects data that are used to answer a wide range of what, when, and how questions pertaining to a particular population or group. It "aimed at casting light on current issues or problems through a process of data collection that enables them to describe the situation more completely than was possible without employing this method (Fox, W. & Bayat, M.S. 2007, p.45).

The researcher adopts descriptive research design. This method is appropriate as the research deals with more focused aspects of forensic accounting and fraud. It describes, explains, and assists in comprehending the role of forensic accounting on internal control systems, malpractice on the notion of forensic accounting, and the procedures used by forensic accountants to mitigate frauds. By evaluating these factors, the impact of the strategies is examined in terms of how they play a role in combating public sector frauds, whether as potential risks or actual incidents that have occurred.

Mixed methods research approach is a systematic integration of quantitative and qualitative methods in a single study for purposes of obtaining a fuller picture and deeper understanding of a phenomenon. Mixed methods can be integrated in such a way that qualitative and quantitative methods retain their original structures and procedures (pure form mixed

methods). Alternatively, these two methods can be adapted, altered, or synthesized to fit the research and cost situations of the study (modified form mixed methods). (Chen, p. 119)

A mixed methods approach was employed to achieve the main goal of this research. The goal of employing a mixed methods approach was to collect data that could not be collected using a single method and to triangulate so that the conclusions from a single approach could be confirmed with others wherever possible (Yesgat 2009, p.12).

This is because details used in qualitative data can relate to the sample size used in quantitative sample to limit the level of biasness. Therefore, the study generaliz its findings from the sample size drawn from the population.

3.3 Population of the Study

The target population is the group of individuals that the intervention intends to conduct research in and draw conclusions from. The target population of the study are ten governmental enterprise that are found in Addis Ababa. Organizational structure affects organizational action and provides the foundation on which standard operating procedure and routines rest. Therefore, target population are going to be the managers of the organization, internal auditors, financial office's, planning and budget officer, Risk & compliance management department in one organization.

These are chosen to assist the researcher in condensing the utilization of bulk information from the supplied data. It also aids in cost reduction and time savings. Questionnaires were distributed to employees of the selected firms because the Internal Audit and Risk and Compliance Management department deals with topics such as prospective risks and actual threats, rules and processes, communication and monitoring control systems. Interview questions were distributed to the Internal Audit department's ten directors.

3.4 Sampling Method

The sampling method used by the researcher was non-probability sampling because to produce accurate and representative samples by using convenience sampling. Convenience sampling is a kind of non-probability or nonrandom sampling in which members of the target population, as Dörnyei (2007) mentions, are selected for the purpose of the study if they meet certain practical criteria, such as geographical proximity, availability at a certain time, easy accessibility, or the willingness to volunteer.This technique is utilized to address personnel

who are homogeneous in their allocated occupation at each enterprises. The reason for choosing convenience sampling was because members of the target population which are the managers of the organization, internal auditors, financial office's, planning and budget officer, Risk & compliance management department are the bodies that can answer the research question with full knowledge. 15 questionnaires each for 10 organization. As a result, 150 questionnaires are distributed, with 113 of them were collected.

3.5 Data Collection Methods

The main instruments that was used in this research consists of closed-ended (to help the researcher collect statistical information that can serve as quantitative data), open-ended questionnaires and interviews (to help researcher collect qualitative data collection & gain better insights into the minds of the respondents). These different ways of gathering information can supplement each other and hence boost the validity and dependability of the data. In the main, the quantitative data are obtained through closed-ended questionnaires and the qualitative data through openended questionnaires and interviews. Secondary data was Obtained mainly from websites, journals, previous researches and textbooks.

3.6 Data Analysis

Traditionally, as noted by Creswell and Plano Clark (2007), "Data analysis in mixed methods research consists of analyzing the quantitative data using quantitative methods and the qualitative data using qualitative methods" (p. 128).

Data analysis involves removing inaccurate information, fixing errors, and removing omitted data to turn acquired raw data into facts that may be used for decision-making (Kothari, 2011). The data gathered from questionnaires was analyzed and presented using SPSS software, relying on logic for interpretation. Due to its significance for both quantitative and qualitative data types, SPSS was chosen for analysis. Reports on frequencies, trends, and percentage compositions are presented. The data presentation contains a detailed explanation and discussion of the information gathered in relation to theoretical considerations and interviewee replies.

3.7 Ethical Considerations

The research was carried out with ethical responsibility in mind. It entails delivering information to responders, explaining the goal of the study, and how the information will be used. The researcher kept any information gathered strictly confidential. The anonymity of respondents is maintained confidential so that participants feel free and safe to voice their thoughts. Respondents participated on the basis of informed consent. The principle of informed consent involved researchers providing sufficient information and assurances about taking part to allow individuals to understand the implications of participation and to reach a fully informed, considered and freely given decision about whether or not to do so, without the exercise of any pressure or coercion.

CHAPTER FOUR

Results And Discussions

The outputs of the data gathered from respondents are covered in this chapter. IBM SPSS Statistics 20 was used to evaluate and show the data here. senior personnel, the top management, Internal auditors, financial offices, planning and budget officers and the Risk & compliance management department completed and returned 113 of the 150 questionnaires that were given. Following are respondents' perceptions of each question about how they consider the role of forensic accounting against fraud by governmental enterprises:

4.1 Background and General Information of Respondents

4.1.1 Gender of Respondents

This section shows the gender proportions of respondents. Out of the responded questionnaires of 113 employees, 82 of them were male and the remaining 31 were identified to be female. As shown on the table below(Table 4.1.1) the significant number of respondents, 72.6%, were recorded as male and 27.4% as female.

Table 4.1.1: Gender of Respondents

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	82	72.6	72.6	72.6
	Female	31	27.4	27.4	100.0
	Total	113	100.0	100.0	

Source: Study Survey, 2023

4.1.2 Educational Status

Figure 2: Educational Status
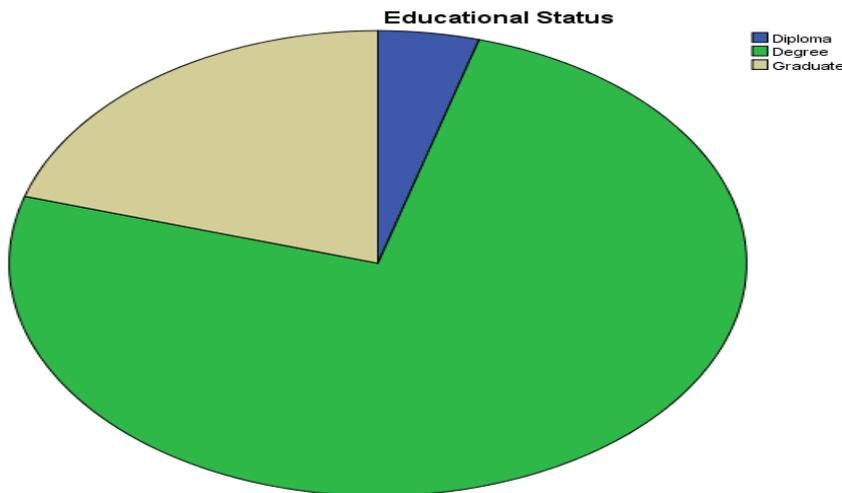
Source: Study Survey, 2023

4.1.3 Work Experience

The percentage combination of respondents' work experience is displayed in the table below. 43.4% of the workforce has more than ten years of work experience. 39.8% of them indicated they had between 6 and 10 years of experience. 14.2% of them have three to five years of experience, and 2.7% have less than three years. This demonstrates that the majority of employee have more than 80% of the employees are well-versed in the organization's culture and working methods. As a result, it facilitates professional problem-solving and reduces misunderstandings about fundamental fraud-related topics.

Figure 3: Work Experience
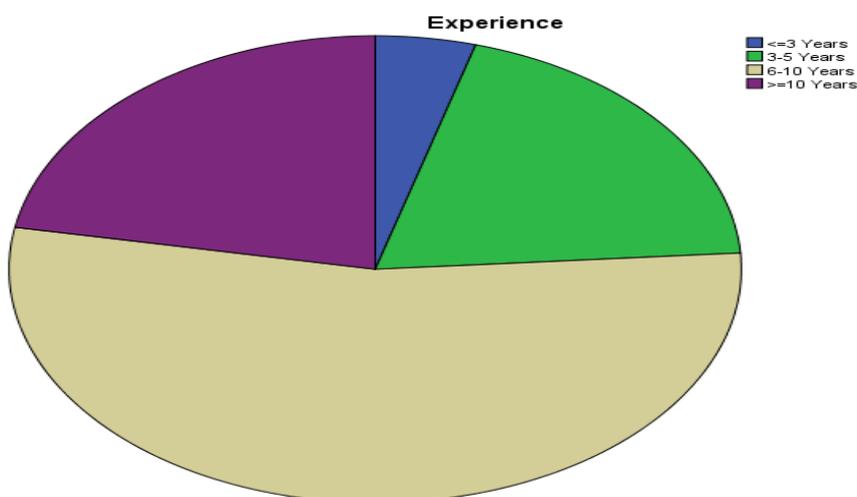
Source: Study Survey, 2023

4.2 Forensic Accounting on Internal Control System

4.2.1 Forensic Accounting on Internal Control System Training for Employees, Performance Monitoring and Job Rotation

Respondents indicated in the table below, Q (1), that forensic accounting is used in their organization. 95 (84%) of the 113 respondents in the sample verified that their organization had a forensic accounting practice, while 18 respondents (or 15.9%) said they do not. The survey result for this question shows a standard deviation of 0.388, indicating that respondents' responses are more similar to one another .

Respondents to question (2) described the frequency with which their organization provides training to employees, as well as whether or not it does. Out of a total of 113 respondents, 96 (85%) agreed that their company provided staff training on how to identify, address, and report fraudulent activity. However, 17 (15%) disagreed and said that this was not the case. Tghose in agreement that training is given in a number of situations. Periodically, new workers are welcomed into the department and existing employees are offered promotions so they can join the team of internal auditors. It is therefore possible to estimate that training sessions occur about once each year. With a standard deviation of 0.359, the survey's outcome for this question suggests that respondents' replies are more likely to be similar to one another and suggest that both the researcher and the respondents may have a shared understanding of the subject.

Q (3) discusses the internal control regulations that are solely carried out by the internal control division. 42 respondents (37.20%) disagreed with the existence of policies that are only implemented, while 71 (62.80%) agreed. The respondents should have similar witnesses to the existence of these policies in the department, according to a standard deviation of 0.485. In addition to the general control procedures designed to oversee daily operations within the organization, policies dealing with fraud issues have also been developed.

Q (4) regularly displays the performance reviews of its employees. According to the data, 102 (90.30%) of the respondents had seen frequent performance evaluations being conducted. A score is assigned to 11 (9.70%) responders who gave no evaluation. The management may use this performance management as a guide when elevating people to higher positions and raising salaries. This demotivates workers to refrain from committing crimes. A standard deviation of 0.298 suggests that respondents consistently responded to the researcher's question and understood it.

The response to question (5) reveals whether or not job rotations are used in your organization. 105 respondents (92.90%) indicated that there is no work rotation in the organization, while 7.1 respondents (8%) agreed that job rotation should be used. Employees are encouraged to utilize their position as an advantage to conduct fraud and eventually become accustomed to the crimes because job rotation is not applicable. They then defend their illegal behavior as being morally correct.

Table 4.2.1: Training for employees, Internal control policies, Performance monitoring and Job rotation

		Yes	No	N	Mean	Std. Deviation
Is forensic accounting in practice in your organization?	F	95	18	113	1.16	0.368
	%	84%	15.90%			
Is there a training that provides guidance for how to identify address and report fraudlant act?	F	96	17	113	1.15	0.359
	%	85%	15%			
Are the internal control policies implemented by functions on internal control department only?	F	71	42	113	1.37	0.485
	%	62.80%	37.20%			
Is the performance of staff members regularly monitored?	F	102	11	113	1.1	0.298
	%	90.30%	9.70%			
Does your organization have a regular job rotation cycle?	F	8	105	113	1.07	0.258
	%	7.1%	92.90%			
Valid N (listwise)				113		

Source: Study Survey, 2023

4.2.2 Follow-Up of Training and Necessity of Policies and Procedures

In this section, the success rate of the constancy of the training offered is evaluated. As demonstrated in Table 4.2.2, more than 80% of employees have responded that their company offers training. Here, the challenge is to examine the consistency and relevance of the training provided by the organizations to their staff. According to the table that is included below, 54 (47.79%) of the employees report inconsistently unsuccessful training, whereas 59 (52.21%) report consistently effective training sessions. Employees have difficulties keeping up with certain issues that need to be addressed to combat financial crime because of the inconsistent training. This limits the likelihood of preventing organization frauds in their tracks and even makes it challenging to estimate or evaluate the subsequent

losses, both monetary and otherwise. Additionally, future responsibilities of their regular work will not be affected by new changes to policies, which are typically distributed to employees as memoranda.This in turn has an impact on communication, preventing the changes from being applied as intended.

Concerning the importance of these policies and procedures in tackling fraud threats, respondents' responses revealed that 83 (73.5%) believe that these policies are sufficient in doing so. Of these, 22 (19.5%) were less efficient. 8 (7.1%) people said that policies and procedures were not necessary to address the risk of fraud. This shows that the rules and regulations that have been created and adopted help with preventive measures. These organizations has taken precautionary actions to lessen these hazards. It may be failed or unidentified attempts, or it may be unsuccessful attempts. The government still continues to demand that these public businesses report such attempts along with the circumstances surrounding the fraud's failure. With the execution of these policies and procedures, the attempts and justifications are guaranteed, and it can be inferred that they are pertinent in managing the dangers of fraud.

Table 4.2.2: Follow-up of training and Necessity of policies and procedures

		Less effective	Effective	Ineffective	Mean	Std. Deviation
How do you evaluate the proper follow up for consistency of training put-in to Practice	F	_	59	54	1.477876	.502
	%		52.21%	47.79%		
How do you measure the necessity of these policies & procedures in addressing risks of fraud?	F	22	83	8	1.876106	.502
	%	19.5	73.5	7.1		

Source: Study Survey, 2023

4.2.3 Policy Review

Though it is taken onto account to review policies and procedures, it is not rewritten as when modifications and improvements are made each time but rather modifications that needs to be addressed. The percentage composition of respondents' responses on the frequency of policy review is shown in the table below. As per 3 (2.7%) of respondents, policy review is made

annually. The highest portion of respondents, 110 (97.3%), agreed that policy review is made every 5 years.

Reviewing policy assists organizations in dealing with circumstances that affect daily operations. The essential considerations in developing these policies are preventive, detective, and mitigating actions. We rely on these principles while doing regular audits or conducting fraud investigations so that regular audits continue to serve as operational duties and investigative actions on prospective threats or real fraud cases, as well as bringing up legal issues. As a result, we may conclude that frequent policy review directly aids internal auditors' forensic accounting work and contributes to the effective management of fraud situations.

Table 4.2.3: policy review

How often are the policies review?							
		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	Std. Deviation
Valid	Annually	3	2.7	2.7	2.7	3.97	.161
	Five years	110	97.3	97.3	100.0		

Source: Study Survey, 2023

4.3 Methods And Techniques In Forensic Accounting

Forensic accounting techniques include running background checks on potential workers. In response to Q 1 in table 4.3.0, 106 employees (or 94.7%) said they agreed with the practice of checking applicants' backgrounds. The background investigation is done at random to look into any prior history. Prospecting is a strategy used by employers to create a trustworthy and credible employee-employer relationship. Organizations ask the federal police crime investigation office for a forensic test after analyzing entrance exams and considering potential new hires. While 6 (5.3%) of the respondents said there is no background check on employees. As long as other requirements are completed, a person holding a police clearance certificate is qualified for work, serving as a credential for organizations.

Q2 responses 96 (84.9%) stated that their performance is checked and balanced on a regular basis. Employee performance assessments disregarded by 17 (15%) . This performance review is one of the factors that companies consider while advancing new role assignments

and managing trust issues with present employees. This is also used as a detective tool to track progress and meet predetermined goals.

As a result, it might be viewed as a crucial forensic accounting tool for in combating fraud before it occurs. Respondents provided their opinions on the appraisal of fraud trends in Q (3). According to 74(65.5%) of the respondents, fraud is on the rise in governmental organizations. There is no fraud trend evaluation for 39 (34.5%) cases. The trend evaluation on fraud cases aids organizations in determining the most often reported fraud cases, as well as the reasons for and purposes behind cases that have already been reported. In order to work on new policy concerns and adjustments to existing ones, management might use these trend reports as a starting point. Additionally, it aids them in regions where special attention is required and danger zones are identified.

Table 4.3.1: Background check on employees, Periodic performance check and Trend of frauds

		No	Yes		N	Mean	Std. Deviation
			Random	Perodic			
Background check on new employees	F	6	79	28	113	1.19	.515
	%	5.3	69.9	24.8	100		
Periodic check and balance of performance comparison	F	17	96		113	.85	.359
	%	15.0	84.95		100		
Asses the trend of frauds	F	39	74		113	.65	.478
	%	34.5	65.5		100		
Valid N (listwise)							

Source: Study Survey, 2023

The table below examines the consistency of the financial system process as well as the assessments of forensic accounting techniques written as rules and procedures. Respondents' responses on the frequency of checking the consistency of the financial system process have been represented. 64 (56.6%) have consented to quarterly consistency reviews, 18 (15.9%) have agreed to yearly checks, and 31 (27.4%) have agreed to semi-annual checks. This is a proactive auditing method used to detect anomalous behaviors that adhere to the criteria.

According to the comments of the respondents, public enterprises check this to identify or discover suspicious actions in their quarterly checks. This is a method used in forensic accounting, and entities do well in using it to combat financial fraud. The standard deviation value indicates that the replies do not deviate significantly from the mean value.

In other words, the standard deviation of 0.752 indicates that the data are probably near to the mean. Forensic accounting practices are reviewed and updated every five years, according to 68 (60.2%) of the respondents. Of these, 45 (39.8%) did not complete witness reviews.

The modifications to these strategies take into account data from fraud trends. Because trend analysis shows which fraud types frequently occurred, what the causes were, and what the fraudsters' motivations were, it is easier to trace the suitable strategies for existing frauds and new techniques to update with. As a result, it can be inferred here that updates on forensic accounting techniques are assessed in relation to actual fraud instances that are actually occurring and suspicious actions. They are regarded as preventive strategies for future risk responses as well as detective approaches for already occurring fraud situations. As a result, it plays a significant role in reducing public-sector fraud.

Table 4.3.2: Frequency on consistency of financial system process and reviews on forensic

		No	Yes				N	Mean	Std. Deviation
			Quarterly	Semi-Annually	Annually	5-year			
Frequency on consistancy of financial system process	F		64	31	18		113	1.59	.752
	%		56.6	27.4	15.9		100		
Review and updates on techniques drafted as procedures & policies	F	45				68	113	2.41	1.967
	%	39.8				60.2	100		
Valid N (listwise)							113		

accounting techniques drafted as policies and procedures

Source: Study Survey, 2023

Table 4.3.3 Methods on fraud identification

Case Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
$Identifyfraud[a]	86	61.9%	53	38.1%	139	100.0%

   a. Dichotomy group tabulated at value 1.

$Identifyfraud Frequencies

		Responses		Percent of
		N	Percent	Cases
Methods to identify fraud[a]	Riskassessment	47	26.0%	54.7%
	Performancecomparison	31	17.1%	36.0%
	Systemanalysis	45	24.9%	52.3%
	Ratioanalysis	55	30.4%	64.0%
	Mathematicalmodelling	3	1.7%	3.5%
Total		181	100.0%	210.5%

a. Dichotomy group tabulated at value 1.

Table 4.3.4 presents data from respondents on methods that public organizations use to detect fraud. As previously described in the checks for consistency in the financial system process, there are several approaches for detecting fraud. We'll go over the most prevalent types of fraud detection procedures here. Ratio analysis was identified as a primary method for detecting fraud by 30.4% of respondents, followed by risk assessment (26.0%), system analysis (17.1%), and mathematical modeling (3%).

Governmental bodies typically use ratio analysis techniques to detect abnormalities based on respondents' responses. This is a vulnerability assessment test used by public organizations. It

uses a quantitative approach to examine a company's balance sheet and income statement in order to gather knowledge of its liquidity, operational effectiveness, and profitability. Fundamental investigation into equity is built on ratio analysis. It offers useful details on the financial statements' representations of the organization's profitability, solvency, operational effectiveness, and liquidity positions.

Risk assessment procedures are the second most used forensic accounting methodology. This exam is used by government bodies in either investigative fraud auditing or normal auditing. Investigative fraud auditing is a type of inquiry that is initiated by high management and extends across the entity. It assesses the likelihood and repercussions of potential mishaps, as well as the tolerances for such incidents. The outcomes of this procedure might be expressed quantitatively or qualitatively. by thoroughly inspecting their workplace to discover those objects, circumstances, activities, and so on that may cause harm. After identifying the risk, they examine and assess its likelihood and severity.

System analysis is the third most commonly mentioned approach. This strategy is consistent with the statement about examining and improving techniques that have been written as rules and procedures. Internal auditors notice scenarios that allow culprits to conduct fraud after going through extensive inspections and audits to uncover frauds. These are the gaps that fraudsters exploit to accomplish their crimes. This is not a one-time exercise that is completed after detecting fraud; rather, it is used and considered while making modifications and updates to policies and procedures. This technique assists internal auditors by minimizing the possibility that such opportunities may be used to perpetrate fraud.

Table 4.3.5: Forensic Accounting Techniques

Case Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
$Technques[a]	107	93.0%	8	7.0%	115	100.0%

$Techniques Frequencies

		Responses		Percent of
		N	Percent	Cases
Techniques app;ed to prevent and detect[a]	Computerassistedre	53	14.5%	49.5%
	Separatefunctionsonduties	31	8.5%	29.0%
	Rotationofdutiesofemployees	25	6.8%	23.4%
	Randomeauditsofcompanyaccounts	33	9.0%	30.8%
	ITcontrol	62	16.9%	57.9%
	Ratioanalysis	22	6.0%	20.6%
	Datamachingusingdatamining	47	12.5%	43.9%
	Implementingtightinternalcontrol	49	13.4%	45.8%
	Limitingaccesstocompanyproprietary	28	7.7%	26.2%
	Assigningtrustedoutsiderforreviewofaccounts	16	4.4%	15.0%
Total		366	100.0%	342.1%

a. Dichotomy group tabulated at value 1.

The forensic accounting methods employed by governmental organizations to combat and identify frauds are presented in Table 4.3.5. According to the respondents, IT controls are the top-ranked approach.This involves modifying the IT infrastructure to make it more challenging for criminals to alter the database. Additionally, it offers its users a comfortable setting, cordial interactions with the system, and time-saving efficiency. It is a procedure or

policy that provides a reasonable assurance that the information technology (IT) used by an organization operates as intended, that data is reliable and that the organization is in compliance with applicable laws and regulations

Separate roles and responsibilities is the second-ranked preventative measures employed by these organizations. These methods are designed to lessen the likelihood that workers may exploit their dual responsibilities as an excuse to conduct fraud. Organizations do learn from such acts and take precautions to stop them from receiving the same work or even access to confidential information in the future.

The third rated method used is computer assisted review (CAR). This method involves reviewing papers and even tracking down necessary documents using the organizational structure. This is an example of a system-based audit where integrated documentation is discovered, such as proof indicating who approved the transaction, the time it occurred, and the date. It improves efficiency and primarily aids in the immediate detection of fraud. IT auditors play a significant part in ensuring that the system is operating efficiently and that it is configured to make it simple for inspectors to identify fraud.

4.4 Interview Questions

The researched intend to interview 10 top internal auditors one from each of the ten organization but unfortunately 7 of them were willing to corporate. Q (1) what are the steps applied in analyzing fraud case. Majority of the managers answered, fraud can take many forms, and as fraudulent activities become more stealth and difficult to detect, and public sector organizations are challenged to keep up. The key to fraud detection and prevention is building a robust data analytics strategy to understand the data, derive actionable insights, and mitigate the risks and after detecting a possible fraud the public sector hand the case to anti-corruption commission for further investigation. The respondents did not give a detailed steps that the organization follows. The second question that was interviewed is how do you assess the use of forensic accounting techniques in helping combat fraud? The interviewees stipulated that forensic auditing techniques are application of forensic accounting that are dynamic and strategic tool which helps in combating the corruption, financial crimes, and frauds. The third question asks how the trend assessment helps in forensic accounting work. Detecting and investigating fraud can be time consuming and challenging therefore, trend evaluation on fraud cases aids organizations in determining the most often reported fraud cases, as well as the reasons for and purposes behind cases as the respondents implied.

CHAPTER FIVE
Conclusions and Recommendations

The findings of the outputs from SPSS were covered in the previous chapter. Results from interview questions were also included and succinctly presented under the appropriate response sets. The research made an effort to investigate how forensic accounting protects Ethiopian government entities against fraud. The conclusions, suggestions, and summaries in this chapter will be based on the gaps found.

5.1 Summary of Findings

Training is taught on how to address, deal with, and report fraudulent conduct. These trainings are provided to explain information on policies and procedures designed as guidelines for employees. Each work responsibility comes with its own set of obstacles and responsibilities. When staff lack the necessary knowledge or expertise, errors and blunders are more likely to occur.

A great deal of these organizations suggest that forensic accounting is being practiced. Furthermore, these public organizations give training on how to confront, deal with, and report fraudulent acts. The training is provided to explain specifics on the processes designed as guidelines, as well as to update newly released policies to its staff members. Each work responsibility comes with its own set of obstacles and responsibilities. When staff lack the necessary knowledge or expertise, mistakes and blunders are more likely to occur. It is suggested that the training season occurs once a year.

It is additionally claimed that the organization's training is consistent and relevant, with a success rate of more than 50%. On the other hand a hand full of them stated that training is

inconsistent. Because staff must stay up with specific concerns that must be addressed in order to prevent financial crime.

In government institutions, policies are evaluated. Policies are created by the government, modifying or amending them on a regular basis or frequently will be challenging. As a result, it is reviewed every five years. Effective policies and procedures, as well as the handbook as a whole, are living documents that must evolve and change in tandem with the company. Regular policy reviews are a crucial aspect of any policy and process management strategy, and the government invests time, energy, and resources in them. The importance of rules and processes in addressing risks has been identified as important instruments for preventing fraud.

Employee performance monitoring is also used as a technique for assessing employees' capabilities or for recognizing employees who performed well. It aids with employee growth, and acknowledging their successes is certain to boost engagement, retention, and productivity.

Method & techniques in combating fraud is exercised in public enterprises. Auditor general in audit approach conducts procedures to evaluate the reliability of the relevant institutions internal control and to report there on, serves as a very definite deterrent for potential perpetrators of economic and financial crimes. Submitted allegation that are confirmed or refuted by collecting and submitting substantive evidence the reactive measures will be implemented.IT control, separate roles and responsibilities and computer assisted review were the major techniques used by the public organization.

5.2 Conclusions

The main role of forensic accounting in public sector is to detect and prevent fraud, waste, and abuse of funds, as well as to ensure compliance with laws and regulations. It involves the application of accounting, auditing, and investigative skills to uncover financial irregularities and provide evidence for legal proceedings. Forensic accountants may also provide consulting services to help improve internal controls and risk management processes within public sector organizations. Overall, the goal of forensic accounting in the public sector is to promote accountability and transparency in the use of public funds. And to provide evidence that financial fraud has taken place, and present the results of an investigation in such a way that it can withstand cross-examination in court.

One of the activities that assists the investigating parties in aiding the forensic accounting assignment is training on how to confront and disclose fraudulent conduct. The trainings aid

in the analytical processes utilized in the process of preventing, detecting, and investigating. It assists them in determining how the policies and procedures established are carried out. Interacting with top audit and compliance authorities also allows them to broaden their range of common experiences. However, inconsistency in trainings adds to a lack of receiving updates.It fosters an atmosphere in which there is no fair and ethical organizational culture. This impedes the primary preventative measures put in place by the government and entities to combat fraud. Weaknesses will not be addressed appropriately if training practices are inconsistent. As a result, this contradicts the anti-fraud policy framework and execution, contributing to a rise in fraud instances.

In order to make sure that personnel are fully informed of changes and updates, trainings must be conducted consistently. This aids in achieving the defined objectives of the firm. It improves staff morale and reflects well on the organization's safety standards. This supports having reliable, secure, and timely operations in accordance.This may be implemented by companies by organizing frequent training sessions and ensuring that the practice is carried out in the field in order to prepare the organization's personnel for current and changing scenarios appropriately. This lessens the impact of obsolete organizational and governmental changes on the likelihood of fraud occurring.

The practice of forensic accounting in the public sector in Ethiopia is still mostly done by the external auditor. Internal control procedures that have been developed have not been proven to be stringent and practical. Because there are lax controls inside management, internal fraudsters can move freely and are not constrained by these regulations. As a result, offenders, both internal and foreign, conspire for financial crimes against policy implementation. As a result, it is a gap that allows for acts of fraud on state organizations.

Internal controls weaken or fail when there is improper segregation of roles, which is necessary for combating fraud within companies. The fundamental justification for this idea is that it calls for the definition of business processes in such a way that no single user has unchecked access to too much system functionality. Organizations must set priorities and concentrate on the transactions that represent the most risk to the business and employ dependence on technology and IT wherever feasible since establishing business procedures with the proper division of tasks may be complicated and expensive.

Due to the alarming sign for potential fraud, the forensic accounting techniques employed for identification and treatment of this issue have a favorable impact. The most crucial thing businesses can do to combat fraud is to prevent it before it occurred.And it is also

unavoidably necessary to increase everyone's vigilance by utilizing various anti-fraud programs in order to encourage the management executives' and workers' responsibility through informants in order to combat this harmful occurrence.

The use of forensic accounting investigation report in preparation of corruption charge significantly give better interpretation and communication of charges in courts.

5.3 Recommendations

Governmental businesses need reliable internal controls, and regular independent audits can help to establish reliable internal control environments that discourage fraud. In order to prevent opportunities being made available for fraudsters to undertake any fraudulent acts, they must adhere to their control rules and make sure there is a strict internal control by the management. Strong management within a company ensures that employees are treated fairly and safely while working.Management has a significant impact on implementation. Management is ultimately responsible for fraud deterrence inside firms and bears primary responsibility for the prevention and detection of fraud and mistake via the implementation and maintenance of suitable accounting and internal control systems.

Governmental entities must provide a foundation where the incentive elements do not exploit the opportunity and that the stringent punitive measures defined and applied by businesses are minimized. The business must address the reasons given by the workers as personal behavioral concerns by taking steps that directly affect the fraudster, such as wage reductions, firing, and reimbursement of the real loss sustained

The development of forensic accounting as a strategic and dynamic instrument for detecting and preventing fraud in Ethiopia's public sector should be a priority for the government. Furthermore, it is advised that public and private entities develop programs that will turn out accountants who are specialists in fraud identification and prevention.

Add the forensic accounting field to the curricula of accounting departments in Ethiopian universities, and at both undergraduate and graduate levels. This will provide students with the necessary skills and knowledge to pursue a career in forensic accounting, which is a growing field around the world. It will also help to address the issue of financial fraud and

corruption in the country by producing qualified professionals who can investigate and prevent such activities. Overall, incorporating forensic accounting into the curricula of accounting departments in Ethiopian universities is a necessary step towards improving the country's financial sector and promoting transparency and accountability. Levels of preliminary and higher studies through theoretical and practical classes.

The field of forensic accounting lacks research done on it in Ethiopia. This paves the way for future researchers to conduct studies and contribute to the development of the field in the country. It is important to understand the role of forensic accounting in detecting and preventing financial crimes, and its potential impact on the economy. By conducting research in this area, we can better understand the challenges and opportunities for forensic accounting in Ethiopia and develop strategies to improve its effectiveness. Therefore, it is crucial for researchers to take up this opportunity and contribute to the growth of forensic accounting in Ethiopia.

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Questionnaire

St. Mary University

Advanced Accounting and Finance

Dear Participant

I am a student in St Mary University and this questionnaire is part of the requirement of partial fulfilment of my MBA in Advance accounting and finance. This questionnaire is

meant to generate data for elicit information regarding the role of forensic accounting against public sector fraud in your organization.

Please complete the questionnaire by given a corresponding answer to the questions asked to the best of your opinion & understanding & be rest assured that all information received or given by you will be treated with utmost confidence.

In case you need any clarification feel free to contact me on my phone +251941183300.

Thank you.

Part 1: Background of the respondents

1.Gender

   Male ☐   Female ☐

2.Educational Status

   Diploma ☐

   Degree☐

   Post Graduate☐

3.Experience

    ≤ 3 Years ☐

    3- 5 Years ☐

    6-10 years☐

    ≥ 10 Years☐

Part 2: Forensic accounting on internal control system and cause of fraud.

4.Is forensic accounting in practice to investigate fraudulent/dishonest acts in that your organization?

         Yes ☐

         No ☐

5.Is there a training for employees that provides guidance on how to identify address and report fraudulent act?

   Yes ☐

   No ☐

   If yes, how often_____

6.Is there a training for employees that provides guidance on how to identify address and report fraudulent

         Yes ☐

         No ☐

If yes, how often _____

7. How do you evaluate the proper follow up for consistency of training put-in to practice

    Effective ☐   Ineffective ☐

8. Are there internal control policies & procedures?

    Yes ☐   No ☐

9. How often are the policies reviewed?

    Quarterly ☐   Semi-annually ☐   Annually ☐

    Others if any, _____

10. Are the internal control policies implemented by functions on internal control

    department only?

    Yes ☐   No ☐

    If no, which function/job position/departments are mainly addressed?

    _____

11. How do you measure the necessity of these policies & procedures in addressing risks of
fraud?

    Less effective ☐   Effective ☐   Ineffective ☐

12. Is the performance of staff members regularly monitored?

    Yes ☐   No ☐

13. Does your organization have a regular job rotation cycle?

    Yes ☐   No ☐

Part 3: Methods and Techniques in Forensic Accounting

14. Does your department conduct thorough background check on new employees?

    Yes ☐   No ☐

    If yes, Random ☐   Periodic ☐

15. How does your organization identify frauds?

    Background/context reading ☐

    Risk assessment ☐

    Performance comparison ☐

    System analysis ☐

    Ratio analysis ☐

    Mathematical modelling ☐

    Others if any,_____

16. Which forensic accounting techniques are applied to prevent and detect frauds?

    Computer assisted review ☐

Separate functions on duties ☐

Rotation of duties of employees ☐

Random audits of company accounts ☐

IT controls ☐

Ratio analysis ☐

Data matching Using data mining to uncover anomalies ☐

Implementing tight internal control accounting functions ☐

Limiting access to company proprietary information ☐

Assigning trusted outsider for review & reconciliation of accounts ☐

Others if any, _____

17.   How often do you check to ensure consistency of financial system process?

Quarterly ☐   Semi-annually ☐   Annually ☐

Others if any, _____

18.   How do you undertake vulnerability assessment and unique test to detect frauds?

_____

19.   Are there periodic checks and balance of performance comparison?

Yes ☐   No ☐

If yes, which departmental function/s?

20.   Are there reviews and updates on techniques drafted as procedures & policies?

Yes ☐   No ☐

If yes, how often?

Quarterly ☐   Semi-annually ☐   Annually ☐

Others if any,

21.   Does your organization assess the trend of frauds?

Yes ☐   No ☐

Appendix II: Interview Questions

Interview

St. Mary University

Advanced Accounting and Finance

The following Interview questions listed below are designed to collect information about role of forensic accounting in combating frauds in public enterprises. This information will be used as primary data source in this study. Your honest and prompt response will contribute

to present a full image research for the partial fulfilment of my MSc in Accounting and Finance at St. Mary University. Your responses will be kept confidential.

Interview Questions

1. What are the steps applied in analyzing fraud cases in your organization?

2. How do you assess the use of forensic accounting techniques in helping combat frauds in your organization ?

3. How does the trend assessment help in forensic accounting work in your organization?

Thank you for your kind response!