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EFFECT OF FRAUD RISK MANAGEMENT ON REVENUE GROWTH IN WOMEN-OWNED SMALL AND MEDIUM SIZED ENTERPRISES IN STAREHE SUB-COUNTY, KENYA

CAROLYNE WARUI

ADM NO. 087853

**A THESIS SUBMITTED TO THE STRATHMORE UNIVERSITY BUSINESS SCHOOL
IN PARTIAL FULFILLMENT OF THE DEGREE OF MASTER OF COMMERCE OF
STRATHMORE UNIVERSITY**

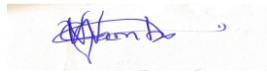
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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the proposal contains no material previously published or written by another person except where due reference is made in the thesis itself.

Carolyne Warui (Name of Candidate)



(Signature)

21.11.2024

(Date)

Approval

The proposal of (Name of Candidate) was reviewed and approved by the following:

Name of Supervisor: Dr. David Mathuva

Faculty Affiliation:

Institution



28 April 2025



ABSTRACT

Fraud continues to be a significant challenge for SMEs, particularly women-owned enterprises, as it directly affects financial stability and revenue growth. This study examined the impact of fraud risk management on the revenue growth of women-owned SMEs in Starehe Sub-County, focusing on four key areas: fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies. A descriptive correlational research design was employed, using a quantitative approach to analyse the relationships between these factors and revenue growth. Stratified random sampling was utilised to select SMEs from Starehe Sub-County, targeting business owners and financial decision-makers, resulting in a total sample of 236 respondents. Data were collected using structured questionnaires with a five-point Likert scale. Findings revealed that fraud risk assessment, fraud detection, and anti-fraud policies had strong and statistically significant positive effects on revenue growth. In contrast, fraud deterrence showed a statistically significant but negative effect, suggesting that overly punitive deterrence strategies may inadvertently hinder business performance. Correlation analysis demonstrated strong positive relationships between revenue growth and the independent variables, with fraud risk assessment showing the highest correlation. Regression analysis confirmed that fraud risk assessment had the greatest impact, followed by anti-fraud policies and fraud detection, while fraud deterrence negatively influenced outcomes. The study concluded that while SMEs had adopted various fraud risk management strategies, gaps in fraud deterrence approaches and the enforcement of anti-fraud policies remained. Strengthening fraud assessment frameworks, investing in fraud detection technologies, and balancing deterrence measures with ethical corporate governance were recommended. Collaboration between SMEs, regulatory bodies, and financial institutions is essential to enhance fraud prevention measures and sustain business growth. By addressing fraud risks and proposing actionable solutions, this research contributes to SME sustainability and financial security. The findings provide valuable insights for policymakers and business owners, reinforcing the importance of fraud risk management in driving SME growth and resilience in Kenya's business environment.

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ABBREVIATIONS AND ACRONYMS

ACFE	:	Association of Certified Fraud Examiners
FBI	:	Federal Bureau of Investigation
FDT	:	Fraud Diamond Theory
GDP	:	Gross Domestic Product
KES	:	Kenya Shilling
KNBS	:	Kenya National Bureau of Statistics
MSE	:	Micro and Small Size Enterprises
MSMEs	:	Micro, Small and Medium-Size Enterprises
SMEs	:	Small and Medium-sized Enterprises



DEFINITIONS OF TERMS

Anti-Fraud Policies: Anti-fraud policies are formal guidelines and procedures established by an organisation to prevent, detect, and respond to fraudulent activities (Widoretno & Tobing, 2022). This will be measured by the presence, comprehensiveness, and enforcement of formal policies aimed at combating fraud within SMEs owned by women in Starehe Sub-County.

Fraud is described as premeditated actions of falsification, trickery or criminal deceit by an individual to obtain undue financial advantage over others (Kassem and Higson, 2012).

Fraudulent Statement refers to the intentional falsification of the financial statements of a company by misrepresenting facts to make a company appear profitable when it is not (Ruankaew, 2016).

Fraud Risk Assessment: Fraud risk assessment refers to the systematic process of identifying and evaluating potential risks of fraud within an organisation (Rehman & Hashim, 2020). It will be measured by the extent to which SMEs owned by women in Starehe Sub-County implement procedures to identify and evaluate the risk of fraud.

Fraud Detection: Refers to fraud detection is the process of identifying fraudulent activities within an organisation (Omair & Alturki, 2020). It will be measured by the frequency and effectiveness of the mechanisms and tools used by SMEs owned by women in Starehe Sub-County to identify fraudulent activities.

Fraud Deterrence: This involves implementing measures and strategies to prevent fraud from occurring within an organisation (Shonhadji & Maulidi, 2021). It will be measured by the strategies and policies put in place by SMEs owned by women in Starehe Sub-County to prevent fraud.

Medium sized enterprise: According to KNBS (2018), Medium sized enterprises refer to any trade, firm, industry, service, or business activity which is either informal or formal that employs between 51 and 100 people with an estimated annual turnover ranging from 5 million to 50 million Kenya Shillings and a combined capital investment not exceeding 50 million Kenya Shillings.

Revenue Growth: Revenue growth refers to the increase in an organisation's income generated from its business operations over a specific period (Olayemi & Folajimi, 2021). It will be measured by comparing the revenue figures of SMEs owned by women in Starehe Sub-County.

Small-sized enterprise refers to any trade, firm, industry, service, or business activity that is either formal or informal and employs between 10 and 50 people with an estimated annual turnover ranging from 500,000 to 5 million Kenya Shillings.



DEDICATION

My foremost gratitude goes to our Almighty God for enabling and guiding me through this tedious process of research thesis writing.

I dedicate this research thesis report to my husband, my parents, and to all my family members for their great support during the time of my study. I have no doubt in my mind that without their continued support and counsel I could not have accomplished this process.



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CHAPTER ONE – INTRODUCTION

1.1 Background of the Study

Revenue growth, defined as the increase in money that small and medium-sized firms (SMEs) generate from sales, services, or other business operations over time, is a crucial indicator of an enterprise's health and sustainability (Akang, 2024). The significance of revenue growth for SMEs goes beyond mere financial health; it is essential to the long-term strategic success of a business (Zhakupov et al., 2023). Financial stability derived from sustained revenue growth enables SMEs to manage risks more effectively, negotiate better terms with vendors, and respond adeptly to economic downturns or shifts in the market (Rosyadah et al., 2022).

A 2019 report by the World Bank identified SMEs as key drivers of economic growth in most economies, especially emerging countries (World Bank SME Finance, 2019). According to the report, these businesses constitute the majority of enterprises globally and play a significant role in both job creation and the expansion of the international economy (World Bank SME Finance, 2019). By the end of 2023, there were over 358 million SMEs worldwide (Dyvik, 2024), accounting for about 50% of jobs and over 90% of enterprises around the globe (World Bank, 2014). In emerging economies, formal SMEs can contribute up to 40% of GDP, according to World Bank estimates. When informal SMEs are included, these figures rise dramatically. Moreover, SMEs represent seven out of ten formal jobs created in emerging economies. Abdullah and Zain (2011) note that SMEs play a critical role in the sustainability and growth of national economies by driving economic development. As such, emerging economies prioritise the development of SMEs, which have historically played significant roles in the industrialisation of established nations. According to the World Economic Forum, SMEs comprise 95% of all registered enterprises and contribute around 50% of the GDP of sub-Saharan countries. Nonetheless, entrepreneurs continue to face serious challenges in growing these enterprises (Cooper, 2023). A thriving Africa requires addressing these barriers and enabling SMEs to realise their potential.

SMEs make significant contributions to an economy, playing a notable role in poverty alleviation, wealth accumulation, and job creation, accounting for two-thirds of all employment worldwide. Evidence from literature reveals that SMEs contribute about 20% of Gross Domestic Product (GDP), employing 85% of persons in employment (Miller & Nyauncho, 2018). Moreover, 90% of businesses in Kenya, ranging from manufacturing to retailing and trading businesses, fall under

the SME category. According to data from the Kenya National Bureau of Statistics, the sector's share of Kenya's GDP grew from 13% in 1993 to 33.8% in 2016 (KEPSA, 2024), highlighting the significance of SMEs in terms of revenue generation. Thus, SMEs play a vital role in the growth and development of any nation, and no government would ignore the contributions of such businesses to its economy. Expressly, no economy can meet its potential without the active participation of indigenous small businesses (McGeever et al., 2020).

A report by the United Nations Industrial Development Organisation (UNIDO) shows that women-owned SMEs account for only 28% of SMEs globally (Estrada & Schuber, 2022). This shows a significant ownership inequality in a sector that significantly contributes to economic growth and job creation, diversifying industries, and fostering innovation (Sherwani, Shaikh, Behal & Siddiqui, 2023). It is essential to note that women-owned enterprises serve as vital drivers of gender equality by promoting financial independence and leadership roles for women, thereby challenging traditional gender norms and empowering women in various societies (Lambert & Deyganto, 2023). Revenue growth for these SMEs, which often operate with limited resources and face intense competition from larger corporations, will help in attracting investments, supporting expansions, and increasing their market share (Zhakupov et al., 2023). Moreover, revenue growth will provide the financial stability needed to innovate, either by developing new products or improving existing ones, which is vital for staying relevant in the rapidly changing markets, as advocated for by Yessilov et al. (2023). Since women entrepreneurs often face unique challenges and systemic biases, focusing on them in research is essential to identify and address these barriers. The number of women in entrepreneurial areas is increasing around the globe as the world strives for a more gender-equal society (Ngumbela, 2023). Even though numerous countries have legislation allowing women to start and run their enterprises, women still encounter gender-specific obstacles on their entrepreneurial journey. Rahma et al. (2023) argue that women entrepreneurs frequently encounter unique challenges and vulnerabilities in the business world. These challenges range from gender bias and stereotypes, limited access to financing and capital, reduced networking opportunities, and the burden of balancing business responsibilities with traditional caregiving roles (Singh, 2023). Additionally, Bharadwaj et al. (2023) believe that women-owned businesses face difficulties in scaling up and breaking into male-dominated industries. However, most of these challenges and barriers have been studied widely (Majumdar & Mittal, 2024; Mwobobia, 2012; Ogundana, 2022; Shaikh, 2020; etc.), and specific policy

recommendations have been fronted to address them in the last decade. One area that remains inadequately exploited is fraud risk management on the growth of SMEs, and especially women-owned SMEs, despite their significance to the economy.

The two most prevalent causes of fraud in SMEs are low employee morale and inadequate internal control (Zainal et al., 2021). According to the Association of Certified Fraud Examiners (ACFE), a typical business loses about 7% of its revenues due to employee theft. Small businesses have been found to suffer more than corporate businesses due to their meagre profits. They are the most vulnerable to fraud due to their weak internal controls (ACFE, 2018). SMEs have smaller resources to prevent and recover from fraud; hence, fraud is a debilitating factor to their growth and success. Fraud, if not controlled well and in advance, may lead to significant financial losses that may threaten the existence of a business with higher ramifications in the wake of business recovery. Very little effort has gone into investigating the effect of fraud on the operations of SMEs, especially in the midst or aftermath of a crisis, let alone the impact of fraud on women-owned SMEs.

Due to rising debt levels brought on by the epidemic, many women-led SMEs—even those with promising commercial prospects—are under financial strain (Huemer, 2021). To make sure they can recover and overcome the obstacles that lie ahead, new tools and strategies to manage fraud risk are required. Given the significant contribution of SMEs to the Kenyan economy and the difficulties they have encountered due to the pandemic, which has been made worse by the reduced consumer spending power, skyrocketing inflation rates, and disruption of the supply chains, it is crucial to investigate the application of fraud risk management as a strategy to address SMEs' growth. A crucial strategic topic that has not yet been completely addressed is how women-owned SMEs use fraud risk management to foster revenue growth in times of significant crises, particularly in the unique setting of a developing nation like Kenya. This subject serves as the focus of the rest of the present study.

1.1.1 The Concept of Fraud Risk Management

Fraud risk management in business is a comprehensive strategy aimed at identifying, assessing, and mitigating the risks of fraudulent activities within an organisation (Marzuki et al., 2020). It encompasses various policies, procedures, and controls designed to prevent, detect, and respond to fraud. Fraud risk management is essential in safeguarding an organisation's assets, reputation, and long-term viability. Businesses typically incorporate fraud risk management into their broader

risk management plans, focusing on areas vulnerable to fraud such as financial reporting, procurement, and asset misappropriation (Alazzabi et al., 2023). Effective fraud risk management involves not only the use of technological tools such as data analytics and forensic accounting but also the establishment of a strong ethical culture that promotes transparency and accountability (Marzuki *et al.*, 2020).

Just like other business owners, women entrepreneurs encounter several obstacles in their pursuit of their entrepreneurial goals. Given the historical and cultural setting in which they operate, some of the risks that women encounter may be unique to them. Businesses with inadequate or non-existent internal controls have been reported to be more susceptible to fraudulent assaults and asset theft (Davis & Harris, 2020). Due to the small and medium sizes, women-owned SMEs do not have these controls in place, and hence are highly vulnerable to fraud risk. This position is supported by Gilmore-Allen (2015), who argues that small businesses are disproportionately unprepared for and susceptible to occupational fraud. According to PwC statistics, there is a high level of fraud occurrence in organisations globally, reaching 46% in 2022. The incidence is even higher in the eastern Africa region, with a reported occurrence of 63% (PwC, 2022). Some of the common fraud practices include supply chain fraud, bribery and corruption, procurement fraud, asset theft, and customer fraud.

The necessity of fraud risk management stems from the potential devastating impacts of these fraud practices on a business (Marzuki *et al.*, 2024). These impacts include financial losses, legal repercussions, damage to reputation, and erosion of employee morale and customer trust. By effectively managing fraud risks, organisations can reduce the likelihood of fraud occurrences and minimise their potential impacts (Sapiri, 2024). Key elements of a robust fraud risk management program include regular risk assessments, tailored anti-fraud policies, continuous monitoring, and training programs for employees to recognise and report fraudulent activities. Furthermore, an effective response plan is crucial for addressing fraud incidents when they occur, ensuring that the organisation can handle them swiftly and efficiently to mitigate losses and maintain stakeholder confidence (Taherdoost, 2021).

Women-owned SMEs face heightened vulnerability to fraud due to typically having fewer resources to allocate towards comprehensive fraud risk management systems (Chalwe-Mulenga et al., 2023; The World Bank, 2024). These enterprises often lack the financial and human capital needed to establish extensive internal controls, perform exhaustive due diligence, or adopt

advanced cybersecurity measures (Adeboye, 2024). As a result, they are particularly susceptible to various forms of fraud, which not only lead to significant financial losses and reputational damage but also exacerbate gender-based disparities within the business world. Effective fraud risk management for these businesses involves regular risk assessments, the creation of tailored anti-fraud policies, continuous monitoring and reporting systems, and strategic investments in staff training and technological resources (Adeboye, 2024). Addressing these vulnerabilities is essential for closing the gender gap in entrepreneurship and enhancing the economic stability and growth of women-owned SMEs (Chikwavarara, 2018).

1.1.2 Revenue Growth of Women-Owned SMEs

Women-owned SMEs refer to small and medium-sized businesses that are primarily owned and operated by women entrepreneurs (Khan et al., 2021). These enterprises play a vital role in driving economic growth, fostering gender equality, and promoting diversity in the business world. Women-owned SMEs often face unique challenges such as limited access to funding, resources, and market opportunities (Butkouskaya et al., 2020). However, they also bring innovative solutions, create jobs, and contribute to the overall development of local and global economies. Supporting and empowering women in entrepreneurship is crucial for harnessing their potential and enhancing the resilience and sustainability of SMEs in various industries.

Going by a 2020 report from the Association of Certified Fraud Examiners on the worldwide study of occupational fraud and abuse, the issue of fraud incidence is becoming worse every day (ACFE, 2020). According to this report, 2,504 instances from 125 countries were documented in 2020, with fraud accounting for over \$3.6 billion in revenue loss. According to ACFE, fraud costs businesses around 5% of their annual revenue, as of 2020, and this was a major cause of SMEs' failure (ACFE, 2020; Zainal et al., 2021). However, the statistics have slightly gone down, judging by the 2024 AFCE report, which records 1921 instances of fraud from 138 countries, with an estimated revenue loss of 3.1 billion (AFCE, 2024). According to KEPSA (2024), information about SMEs is mostly based on estimates because of the informal nature of these enterprises, and technology cannot be correctly relied upon since many entrepreneurs in this sector still prefer to trade in cash. Therefore, obtaining the correct statistics of fraud instances in the SME sector is a challenge.

The effect of fraud risk management on revenue growth of women-owned SMEs is severe, predominantly due to their lower resilience, less flexibility, and higher levels of vulnerability

related to their size. Moreover, these SMEs became more exposed to disruption due to the pandemic (McKinsey, 2020). Scholars generally agree that employee fraud continues to be a major concern for the growth of SMEs across all industries (Klein, 2015). The cost of controlling and preventing fraud, especially during the COVID-19 pandemic, is relatively higher among women-owned Small and medium-sized Enterprises due to business disruptions and changes in work processes, such as the shifting to online working or teleworking (Zainal et al., 2022). Small and medium-sized Enterprises face difficulties adopting technologies with a low level of digitalisation and prevention or detection of digital fraud.

1.1.3 Women-Owned SMEs in Starehe Sub-County

Small and Medium-sized Enterprises (SMEs) are important drivers of economic growth and innovation in many economies worldwide (Karadag, 2015). These businesses typically have a limited number of employees and often fall below a certain revenue threshold, as defined by each country's specific criteria. SMEs play a pivotal role in creating jobs, fostering entrepreneurship, and contributing to local communities. They are known for their flexibility and adaptability, often serving as incubators for new ideas and technologies (Rajapakshe et al., 2020). However, SMEs also face various challenges, including limited access to financing, regulatory complexities, and vulnerability to economic fluctuations. Supporting the growth and resilience of SMEs is essential for promoting economic diversity and sustainability (Rajapakshe *et al.*, 2020).

Approximately 14.9 million Kenyans are employed by more than 7.4 million SMEs across a range of economic sectors in the country (KEPSA, 2024). Most of these SMEs are informal, making it difficult to classify whether they are women-owned or men-owned. Statistics from the 2021 Kenya Bankers Association report indicate that only 22.9 % of MSEs in Kenya are owned by women (KBA, 2021). Since they mostly conduct cash business (KEPSA, 2024), it is also challenging to verify how much revenue they make. Although this gap has been slightly addressed by technology like mobile money (M-Pesa), most SMEs still prefer to trade in cash, and information on revenue and ownership is frequently provided through estimates. In Nairobi, there were approximately 14,232 registered and operating women-led SMEs across the 17 sub-counties in 2022, according to the Star Newspaper (Maombo, 2022). This statistic demonstrates the substantial number of female entrepreneurs who support the local economy despite obstacles such as restricted access to capital and business networks.

In Kenya, SMEs operate in all sectors of the economy, that is, manufacturing, trade, and service subsectors (Omondi & Jagongo, 2018). The SMEs range from those unregistered, known as Jua Kali enterprises, to those formally registered small-scale businesses, such as supermarkets, wholesale shops, and transport companies. Almost two-thirds of all SMEs in Kenya are in the rural areas, with only one-third found in the urban areas. About 17 per cent are based in Nairobi and Mombasa (KNBS, 2017). According to the City County of Nairobi, the registered SMEs in the hospitality industry make up 3.67 per cent of the total number of registered SMEs in Nairobi City County. According to Aseka (2014), small and medium enterprises (SMEs) play an important role in the Kenyan economy. Although they accelerate economic growth, generate employment, foreign exchange, and tax revenue, they operate against heavy odds, and any slight changes in the external environment hit them strongly. Despite their significance, studies indicate that three out of five businesses in Kenya close shop within the first few months of their operation due to revenue decline and lack of proper internal controls to caution from external financial shocks and fraudulent activities.

Women-owned SMEs are in particular more likely to close due to financial constraints and digital financial service attacks. The challenge of accessing finance makes women-owned SMEs highly vulnerable to financial shocks and external attacks (Butkouskaya et al., 2020; Kimeu et al., 2020). A 2019 report by the Kenya National Bureau of Statistics (KNBS) indicated that locally, only a small percentage of women-owned SMEs have access to formal financial institutions. Struggling to secure loans, women-owned enterprises barely have adequate funds to effectively protect themselves from financial shocks and external attacks like fraud. Limited financial knowledge also makes women entrepreneurs targets of astute fraudsters. While the Kenyan government remains vocal on economic empowerment approaches and skills to support women in the marketplace, most women-owned SMEs remain a target for scammers. A 2024 report by Mastercard revealed that women-owned SMEs in Kenya face heightened fraud risks, especially online, with a significant percentage uncertain about how to effectively caution themselves (Mastercard, 2024). These fraud risks adversely affect the revenue growth of SMEs, leading to financial losses, reputational damage, and a decline in customer trust, eventually obstructing their ability to thrive. Women-owned SMEs, with their limited resources, are in particular more susceptible to fraud risks as they may lack the expertise and infrastructure to adequately and effectively counter and mitigate fraud.

1.2 Statement of the Problem

Small and Medium-Sized Enterprises (SMEs) owned by women in Kenya are currently experiencing heightened vulnerability to fraudulent activities, partly due to the rapid shift towards digital platforms and remote operations (Ahmed, 2022). This shift often comes without adequate preparation or resources to implement robust cybersecurity measures. As a result, these enterprises face various forms of fraud, including financial fraud, identity theft, and cyber scams, leading to significant financial losses. The effect of fraud is not just monetary; it also extends to the erosion of customer trust and damage to the business reputation, which are crucial for the survival and growth of any SME (Mwaniki, 2022). Moreover, the recovery process for businesses post-COVID-19 has been slow, exacerbating the situation for women-owned SMEs in Starehe Sub-County. Women entrepreneurs often had to juggle multiple roles and responsibilities, and the pandemic added further strain, limiting their capacity to respond effectively to fraud.

Additionally, pre-existing gender disparities in access to finance and digital literacy make these enterprises more susceptible to fraudulent activities (Koima, 2023). The psychological impact of these challenges cannot be underestimated, as they led to increased stress and anxiety among these business owners, which could have long-term effects on their entrepreneurial spirit and future business prospects. The cumulative effect of these factors points to the need for targeted support measures, including enhanced security infrastructure, access to digital literacy programs, and financial assistance, to help these businesses continue recovering and thriving post-pandemic.

The incidence of fraud among SMEs resulting from customer fraud, forgery of cheques, asset misappropriation, theft of cash, bribery and corruption, and payment to fake suppliers due to collusion with scrupulous employees of the Microbusiness enterprises and SMEs (McKinsey, 2020; PwC, 2022) has been on the rise. The response to this fraud could be the innovation in payments, such as online payment solutions to minimise payment fraud while improving the free flow of funds to boost business and economic activity (McKinsey, 2020). Even though this might be the long-term solution to most fraud in relation to fraud, fraudulent financial statements with intentional misstatements, including omission of amounts or disclosures in financial statements to deceive financial statement users, are still rampant. While the main causes of fraud among Small and medium-sized Enterprises are pressure, opportunity, and rationalisation of their operation to maximise profits, there is a research gap on the effect of fraud on SMEs, especially as the businesses continue to recover from the ravaging effects of the COVID-19 pandemic.

Previous research has revealed that fraud among SMEs has resulted in a higher failure rate, especially in developing countries (Jennings *et al.*, 2013). The high failure rate associated with these small enterprises is attributed to a lack of planning, poor fraud management, and, to some extent, improper financing (Dube & Casale, 2016). Although empirical studies have been conducted about fraud in business, there exists a research gap on the direct linkage of study to relate the effect of fraud especially on the effect of fraud on the operation, performance and growth of SMEs especially women owned in Kenya (Jennings, *et al.*, 2013; Dube & Casale, 2016). Besides, available studies have only focused on SMEs in general. Hess and Cottrell (2015), for instance, highlight that fraud risks have severe impacts on the revenue growth of SMEs, causing financial losses, damaging reputation, and eroding consumer trust, ultimately impeding their ability to thrive. The Association of Certified Fraud Examiners has further emphasised the adverse effects of fraud on business revenue, ascertaining that businesses lose about 5% of their revenues to fraud yearly and fraud is a key contributing factor to the failure of most SMEs (Association of Certified Fraud Examiners, 2024).

In Kenya, fraud has equally been identified as an obstacle to the revenue growth of women-owned SMEs and a threat to their existence. Kiraka (2013) established that while the general indicators of revenue reflect positive growth among women-owned SMEs in terms of total business worth, turnover, gross profit, and number of employees, they conceal incidences of stagnation or decline in growth. Incidents of decline or stagnation fall between 15% to 30% across the four measures of total business worth, turnover, gross profit, and number of employees (Kiraka, 2013). For women-owned SMEs in Kenya, fraud has been a key contributing factor to their stagnation, decline, or failure (Odunga, 2024). Limited resources in these enterprises have, in particular, increased their susceptibility to fraud as resource inadequacy undermines their ability to acquire and secure the expertise and infrastructure for combating fraud adequately. Research (Hess & Cottrell, 2015; Meiryani, 2024) focused on SMEs in general, however, establishes that SMEs can mitigate fraud risks by implementing robust internal controls, including adopting technology for fraud risk assessment, detection, and prevention. In this regard, the current study seeks to determine if fraud risk management measures, such as fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies, are valuable investments that can enable women-owned SMEs in Kenya to scale up their profits.

1.3 Research Objectives

1.3.1 General Objective

The objective of this study was to evaluate the effects of fraud risk management on revenue growth of small and medium-sized enterprises owned by women in Starehe Sub County.

1.3.2 Specific Objectives

To achieve this objective, the following specific objectives were studied.

- i. To explore the effect of fraud risk assessment on revenue growth of SMEs owned by women in Starehe Sub County.
- ii. To determine the effect of fraud detection on revenue growth of SMEs owned by women in Starehe Sub County.
- iii. To assess the effect of fraud deterrence on revenue growth of SMEs owned by women in Starehe Sub County.
- iv. To analyse the effect of anti-fraud policies on revenue growth of SMEs owned by women in Starehe Sub County.

1.4 Research Questions

The following research questions were answered by the study.

- i. What is the effect of fraud risk assessment on the revenue growth of SMEs owned by women in Starehe Sub-County?
- ii. What effect does fraud detection have on the revenue growth of SMEs owned by women in Starehe Sub-County?
- iii. How does fraud deterrence affect the revenue growth of SMEs owned by women in Starehe Sub-County?
- iv. What is the effect of anti-fraud policies on the revenue growth of SMEs owned by women in Starehe Sub-County?

1.5 Scope of the Study

The study examined the effects of fraud risk management on revenue growth of women-owned SMEs in Starehe Sub-County, Kenya. Specifically, the study investigated the effects of fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies on the revenue growth of SMEs owned by women. From a population of 612 registered women-owned businesses in Starehe Sub-County, the study sampled 236 respondents to obtain insights relating to the study subject.

Furthermore, the study relied on primary data, which was collected between February and March 2025.

1.6 Significance of the Study

The results of this research are significant in several ways and to different stakeholders, including policymakers or governments, SME owners or management, and scholars are academicians.

1.6.1 Policymakers/ Government

The insights derived from the research would be employed as a guide in the formulation and implementation of policies to support women-owned SMEs in improving risk management techniques, promoting openness, and growing their revenues. Moreover, policymakers can develop programs, training, or grant initiatives designed to alleviate fraud risks, guaranteeing more conducive business conditions for women entrepreneurs. The study outcomes can also lead to a wider economic recovery planning by responding to the vulnerabilities of SMEs, an important industry in post-pandemic economic recovery.

1.6.2 SME Owners/Management

The research findings would equip women with insights and information on efficient fraud risk mitigation techniques, assisting them in protecting their ventures from revenue losses. Understanding the connection between fraud mitigation and revenue growth would enable SME owners to execute initiatives that directly enhance their profitability and long-term operations. Additionally, the study's findings can be used as a basis to empower women-led SMEs to combat systemic challenges and foster their competitive power.

1.6.3 Scholars and Academicians

The study contributes to the limited body of research on fraud risk mitigation in women-led businesses, especially SMEs in developing countries in the wake of crises and hard business conditions. For scholars, the findings from this research can be employed as a basis for investigating related subjects, like gender-specific issues in business risk management or the sustainable effects of fraud mitigation practices. The study offers a practical scenario for advancing knowledge about SME regulation, fraud prevention, and gender traits in business.

1.7 Chapter Summary

This chapter introduced the study, providing a background and establishing the context for analysing the effect of fraud risk management on revenue growth in women-owned SMEs in Starehe Sub-County, Kenya. As part of contextualising the study, the chapter explored the concept

of fraud risk management, revenue growth of women-owned SMEs, and women-owned SMEs in Starehe Sub-County, justifying why women-owned SMEs. Furthermore, the chapter clarified the problem statement, outlined the research objectives and questions, and discussed the significance and scope of the study. These foundational elements set the stage for evaluating the effect of fraud risk management on revenue growth in women-owned SMEs.



CHAPTER TWO – LITERATURE REVIEW

2.1 Introduction

This research seeks to evaluate the effects of fraud risk management on the revenue growth of SMEs owned by women in Starehe Sub-County, Kenya. The Financial constraint had a devastating effect, halting business transactions, causing sudden economic disruption, and impacting both demand and supply chains of the economies worldwide. SMEs have smaller resources to prevent and recover from fraud, which is rampant and an obstacle to their growth and success. This chapter, therefore, presents the theoretical framework and empirical literature review on fraud and SMEs. While theoretical literature presents theories on which the research is grounded, empirical literature provides a review of previous scholarly work done by other researchers.

2.2 Theoretical Review

This section presents a review of theories that inform the study variables. This research will be grounded on the Fraud Diamond Theory (FDT) of Wolfe and Hermanson (2004) and the Agency Theory of Jensen and Meckling (1976).

2.2.1 The Fraud Diamond Theory

The Fraud Diamond Theory was developed and advanced by Wolfe and Hermanson (2004). It was primarily based on Wolfe's experiences as a fraud investigator and his observation that fraud is explicitly a "people problem". Thus, the theory posits that fraud can only occur in the presence of an incentive, opportunity, rationalisation, and capability (Hermanson & Wolfe, 2024; Dias-Oliveira et al., 2024). The model expands Cressey's Fraud Triangle Theory (1953) by acknowledging the crucial role of capability – the skills and abilities needed to recognise and execute a fraud scheme. By focusing on perpetrator capability, the Fraud Diamond Theory has emerged as a very popular extension of the Fraud Triangle model, which does not devote much attention to the perpetrator.

Unlike the Fraud Triangle Theory, the Fraud Diamond model emphasises the capability aspect, exploring the personal traits and abilities that allow a perpetrator to recognise and exploit fraud opportunities even in the presence of other fraud elements (Hermanson & Wolfe, 2024; Dias-Oliveira et al., 2024). As such, the Fraud Diamond Theory provides a framework for understanding the complex interplay of factors that lead to fraud and the roles of the environment, prevailing situation, and the individual's capabilities as well as personality. Typically, the Fraud Diamond positions much more of the perpetrator in the fraud model, directing more attention to both the

fraudster and the setting. Overall, the model infers that people bring intent and action to a fraud scenario, such that if they are not capable, then fraud may not occur, or rather quickly be discovered if it does occur.

Before engaging in fraud, the perpetrator must first believe that there is an incentive to it. The fraudster perceives that there is an opportunity to commit and conceal fraud, pressure to fulfil their non-shareable financial obligations, and they can rationalise their dishonest act as something other than criminal activity. Perceived opportunity refers to existing circumstances, such as limited or weak controls in place for detecting fraud, while rationalisation of committing fraud refers to the ethical values and attitudes of dishonesty that allow him/her to commit fraud (Mui & Mailley, 2015).

The advocates of the fraud triangle theory emphasise the significance of opportunistic factors as the key influences of committing fraud. Motives to engage in fraud may include personal problems and financial pressures. Opportunities to commit fraud may be presented due to inadequate separation of duties, lack of close supervision and ineffective controls. To exploit these opportunities, perpetrators often try to rationalise their fraudulent actions, making them seem acceptable and even necessary (Dias-Oliveira et al., 2024). Ruankaew (2016) supports the fraud triangle theory that proposes the substitution of rationalisation element in the fraud triangle with personal integrity, which, according to Ruankaew (2016), is more observable as compared to rationalisation. Capability is a situation where a fraudster has the necessary skills or traits, and abilities to turn a fraudulent opportunity into reality. A fraudster recognises an opportunity to commit fraud through their intelligence, position, stress, coercion, and deceit (Mackevicious & Giriunas, 2013; Abdullahi et al., 2015).

Concerning the current study, the Fraud Triangle Theory lays the groundwork for fraud detection, risk assessment, deterrence, and anti-fraud legislation for SMEs in Kenya by explaining how pressure, opportunity, and rationalisation result in fraud. While fraud risk assessments highlight pressures and control weaknesses, detection systems uncover exploited possibilities and indications for rationalisation. Reducing chances via strong regulations, addressing pressures through support programs, and halting rationalisation through ethical training are the main goals of deterrence. Anti-fraud policies foster responsibility, fortify internal controls, and set clear behavioural expectations. The Fraud Triangle Theory is particularly relevant to understanding the motivations behind fraud, providing a basis for developing efficient methods to stop, identify, and

lessen fraud while promoting an integrity-based culture that guarantees improved financial performance and revenue growth among women-owned SMEs in Kenya.

2.2.2 Agency Theory

Agency theory was advanced by Jensen and Meckling (1976) in their philosophy on the relationship between business/firms' owners and their employees (Cuevas-Rodríguez et al., 2012; Boučková, 2015). Shareholders or business owners are defined as principals, while employees or company executives are regarded as agents. Agency is the contractual relationship between business owners or shareholders (principals) in delegating authority to employees (agents) to carry out business activities on their behalf in exchange for a reward (Boučková, 2015). The employees (agents) thus serve the interest of the business owners/shareholders; this is achieved when agents increase the value of the owners' investment in return for rewards (salary/token/fees). Agency theory describes risk-sharing shareholders.

The principal and the agent should align their goals and division of labour towards the achievement of the organisation's or business's objectives (Wanemba, 2010). Should the goals or desires of the agent conflict, then the risk in business will rise. This will escalate if there are difficulties in efficiently and appropriately verifying agent behaviour by the principal (Ndofor et al., 2015). According to Boučková (2015), employees are motivated by their self-interest based on their beliefs and preferences. The potential conflict of interest between agents and principals is attributed to agents' exploitation of information advantages for their benefit at the cost of the principals or when the principals lack information to assess the effectiveness of an agent's behaviour (Murphy & Dacin, 2011).

Agency theory advances that business owners have to balance the task of choosing and controlling their employees by identifying the best employees and by motivating them to behave as required, and consistently appraising and monitoring their behaviour to ensure actual performance (Gupta & Gupta, 2015). The agency theory will apply to this research as the regulator of employees' behaviour in managing business finances and provide a link between the SME women owners and their employees, who are regarded as their agents. With respect to this study, Agency theory is essential to fraud detection, risk assessment, deterrence, and anti-fraud measures because it emphasises the conflicts of interest and knowledge asymmetry between principals (owners) and agents (managers/employees). By keeping an eye out for irregularities in agent behaviour, detection systems fill in information gaps. Risk assessments find supervisory flaws and unbalanced

incentives that agents might take advantage of. Deterrence reduces fraud chances by focusing on goal alignment through accountability measures and equitable rewards. To prevent abuse, anti-fraud rules provide controls such as dual approvals, enforce transparency, and define responsibilities. SMEs may promote accountability and lower the risk of fraud by tackling these issues and ensuring agents behave in the principal's best interests. As a consequence, better financial performance, which is synonymous with improved revenue, is certainly guaranteed. Therefore, by providing an understanding of how agents are likely to act, the agency theory offers a basis for assessing measures such as educating employees on fraud prevention that women SME owners can take to adequately address fraud risks, especially those coming from within their business, to scale up their profits.

2.3 Empirical Review

This section reviews empirical studies that are related to the variables of this study.

2.3.1 Fraud Risk Assessment and Revenue Growth

While previous studies have not directly examined the link between fraud risk assessment and revenue growth in businesses, they have attempted to explore the relationship between fraud risk assessment and key indicators of revenue growth, including financial performance. Thus, by focusing on measures of revenue growth such as financial performance, they offer significant insights relevant to the current study.

Hussaini et al. (2019) examined the effect of fraud risk management, risk culture and performance of the banking sector. Following a comprehensive review of past studies in the subject area, the scholars found that fraud risk management had a positive relationship with bank performance. Similarly, evidence showed that risk culture influences banks' performance (Hussaini et al., 2019). Mugo and Ngugi (2021) established similar findings, demonstrating that fraud risk management improves financial performance. Employing a descriptive survey research design involving structured questionnaires to investigate the effect of fraud risk assessment on the financial performance of SMEs in Nairobi County, Kenya, Mugo and Ngugi (2021) found that SMEs with formal fraud risk assessment procedures had significantly better financial performance, indicated by higher revenue growth and profitability. Despite adopting varying research approaches and focusing on financial performance, Hussaini et al. (2019) and Mugo and Ngugi (2021) underscore the crucial role fraud risk management plays within firms with regard to revenue collection. Their

findings further establish a basis for contextualising the impact of fraud risk management on revenue growth, as financial performance is a key indicator of a business's financial position. Consequently, Ngah et al. (2020) sought to evaluate issues in tax evasion from the perspective of fraudulent financial reporting amongst small and medium-sized enterprises (SMEs) in Malaysia. Using a sample size of 397 companies and the ordinary least squares regression analysis, the researchers found that family-owned firms and company size have a statistically significant positive relationship with tax evasion practices detected during tax audits. Further focusing on fraudulent practices within SMEs, Andoh et al. (2018) established stealing, fake currencies, and deliberate non-payments as the most frequent fraud cases among Ghanaian SMEs. While Ngah et al. (2020) and Andoh et al. (2018) acknowledged the fact that fraudulent activities are common in businesses, they fail to explore their impacts on business, especially on financial performance or revenue growth. Thus, the present research employs a descriptive study design to study women-owned SMEs in Starehe, Kenya. This differs from the two studies above in methodology, focus, and context.

Adopting a mixed methods approach to investigate the role of fraud risk assessment in enhancing the financial performance of manufacturing firms in Malaysia, Ahmad and Mohd (2019) found that firms with comprehensive risk assessment practices experienced improvements in revenue growth and overall financial stability. Manufacturing firms are often large corporations with adequate resources to invest in comprehensive risk assessment practices to mitigate risks while simultaneously improving revenue growth and financial stability. However, this is not the case for small businesses whose limited resources undermine their ability to invest in comprehensive risk assessment and mitigation measures. Othman and Ameer (2022) even identified small businesses as more prone to fraudulent practices, with limited resources exacerbating their susceptibility. Applying a document analysis approach to examine how and why employees used online computer access to commit fraud in New Zealand small businesses, Othman and Ameer (2022) found that the tendency of fraud is heightened in small enterprises since employees are incentivized by external pressures of addictions to view their occupational position as an opportunity to manipulate online access to engage in fraud to finance their multiple responsibilities.

Equally, applying a mixed-methods approach to assess the effect of fraud risk assessment on the financial performance (donor confidence and financial stability) of NGOs in Kenya, Njeru and Karani (2018) found that NGOs with effective fraud risk assessment practices reported improved

financial performance, characterized by stable revenue streams and increased donor contributions. Njeru and Karani's (2018) findings are consistent with those established by Ahmad and Mohd (2019) despite focusing on different contexts and business types. Even though the scholars designate risk assessment as essential for the financial health and sustainability of entities, Njeru and Karani (2018) emphasise its role in NGOs. Additionally, the researchers acknowledge and stress its importance in supporting accountability and transparency in financial management, potentially leading to financial health. Although Njeru and Karani (2018) focus on NGOs as opposed to SMEs being targeted by the current research, they offer valuable insights based on the present investigation.

2.3.2 Fraud Detection and Revenue Growth

Studies have also examined fraud detection and revenue growth, focusing on the impact of the former on the latter. Gupta and Gupta (2015) examined the perception and nature of fraud in India using an exploratory research design to establish key areas in which fraudulent activities occurred. Adopting an exploratory design involving both interviews and questionnaires, Gupta and Gupta (2015) found extensive fraud among organisations in India, with the majority engaging in financial fraud, customer fraud, employee-instigated fraud, supplier collusion fraud and technological fraud. Following a quantitative research design in their study examining the impact of fraud detection practices on the financial performance of SMEs in Accra, Osei and Agyapong (2021) further observed that SMEs with effective fraud detection practices reported higher revenue growth and profitability. From the methodology employed in the two studies – exploratory research design and quantitative research design- the authors differ from the current research's descriptive study design. Moreover, this study will use questionnaires only to gather data from women-owned SMEs, unlike the combination of interviews and questionnaires used by Gupta and Gupta (2015), and focuses on fraud detection on revenue growth and not financial performance, as done by Osei and Agyapong (2021).

Chong and Ahmad (2018) investigated the role of fraud detection in enhancing the financial performance of manufacturing firms in Malaysia. They used a mixed-method approach, combining quantitative data from surveys of 120 manufacturing firms with qualitative data from interviews with industry experts. The study found that firms with robust fraud detection mechanisms experienced significant improvements in revenue growth and overall financial stability. Similarly, Asmah et al. (2020) established that fraud can be categorised in various ways. The areas in which

fraud occurs in SMEs comprise purchases and payments fraud, sales fraud, inventory fraud, employee/ occupational fraud, customer/consumer fraud, data/trade secret fraud, to capital acquisition fraud, among other activities of SMEs. Additionally, a study by Sow et al (2018) aimed to provide an overview of fraud risk among Malaysian small- and medium-sized enterprises (SMEs). A sample of 126 Malaysian SMEs from different industries was employed. The results established that Malaysian SMEs are exposed to a broad range of fraud schemes; inventory, payment, sales and occupational fraud, yet few take action to prevent these frauds. These studies are distinct from the present study with respect to the research design methodologies, focus, and settings.

2.3.3 Fraud Deterrence and Revenue Growth

Lowe and Reckers (2024) experimentally examined deterrents of complicity in fraudulent financial reporting using experienced business managers. They manipulated whistleblowing incentives (reward, penalty, control), corporate governance culture (strong, weak), and measured Machiavellianism. The dependent variable was the perceived likelihood that violations would be reported. Data analysis revealed that penalty whistleblowing provisions significantly increased perceived reporting risk compared to controls. Reward provisions had a marginal effect. A strong governance culture increased perceived reporting likelihood. Sow et al. (2018) equally emphasised governance culture, denoting that a culture characterised by honesty and high integrity mitigates fraudulent activities within firms. Lowe and Reckers (2014) further established that greater Machiavellianism reduced the perceived risk. According to the scholars, whistleblowing incentives only influenced those low in Machiavellianism. Nonetheless, Lowe and Reckers (2024) fail to clearly show the role of fraud deterrence on revenue growth, which is the focus of the current study.

Consequently, Sow et al. (2018) sought to establish the strategies that small Malaysian firms employ to mitigate the occurrence of fraudulent activities. Employing self-administered questionnaires, Sow et al. (2018) established that factors such as a culture characterised by honesty and high integrity, the implementation of antifraud processes and controls, and the presence of suitable oversight functions have a statistically significant and beneficial impact on the effectiveness of fraud prevention systems. Separately, Mwangi and Ndegwa (2020) investigated the influence of fraud risk management practices (preventive, detective, and corrective controls) on fraud occurrence in Kenyan listed companies. Using a causal research design involving

structured questionnaires, Mwangi and Ndegwa (2020) observed that preventive and corrective controls had a significant negative effect on the level of fraud occurrence, while detective controls did not considerably reduce fraud occurrence in Kenyan listed companies. The two studies do not focus on establishing the effect of fraud deterrence on revenue growth. Moreover, the methodologies employed by the authors and the context of the research also differ from the current study.

Similarly, Ratley (2016) established that whistleblower protection strategies play a huge role in detecting and preventing fraud by preventing exposure of employees who report cases of fraudulent activities, such as collisions within a business setup. Employees with critical information about fraud in business setups need protection after disclosing any misbehaviour by fellow employees or the management that may lead to fraud (Ratley, 2016). However, in some instances, staff with important information about fraud within the business setup face various challenges as a result of disclosing their knowledge. Moreover, Gupta and Gupta (2015) established a weak regulatory system that perpetuated corporate fraud and proposed measures to redefine the engagements and role of auditors in identifying fraud scams. The rampant corporate greed had a great impact on the loss of corporate reputation, low profit and failure rate of corporate business in India. The coordination among various regulatory authorities was found to be poorly marred with a blame game after every scam. While the studies examined the deterrence strategies, there is not much focus on their contribution to revenue growth. The current study sought to address this gap by examining the deterrence strategies and their effect on revenue growth for women-owned SMEs in Starehe.

2.3.4 Anti-Fraud Policies and Revenue Growth

Dan'azumi et al. (2024) sought to establish the contribution of anti-fraud policy mechanisms to the financial performance of a selected bank in Nigeria, using First Bank Jos Main Branch as the study context. The researchers collected primary field data via a questionnaire survey involving 40 bank respondents operating in the Jos Main Branch. Employing hierarchical regression analysis, they examined the contribution of the anti-fraud policies. The results revealed that anti-fraud policy mechanisms had a greater contribution effect on financial performance (R^2 change = 54.5%) compared to internal control (R^2 change = 19.2%). The findings suggest that anti-fraud policy mechanisms contribute significantly to the financial performance of banking industries. Furthermore, Suh and Shim (2020) explored the effect of ethical corporate culture on anti-fraud

strategies in South Korean financial companies, using a mediation model with whistleblowing and comparing commercial banks to small and medium-sized depository institutions. Employing path analysis methods, the study found that proactive managerial efforts, such as setting an ethical tone at the top and implementing ethics training, are necessary for developing an effective whistleblowing policy within an organisation. In turn, whistleblowing positively influences employees' perceptions of the company's overall anti-fraud strategies. The two studies used a hierarchical regression and path analysis, respectively, to establish the effect of the different anti-fraud policies on the financial performance of banks and financial companies, a different context from SMEs in Kenya. This presents a generalisation gap that the present study seeks to address through multiple regression.

Elsewhere, Hamzaee and Salimi (2024) proposed a theoretical framework for an anti-fraud policy based on a "prosperity tripod" of massive data, blockchain technology, and artificial intelligence (AI). They aimed to address societal issues like dishonesty, fraud, pessimism, and divisive issues through a three-tier combination of these technologies. Instead of hypothesising a predetermined economic model, the authors proposed a data-based Vector Autoregression (VAR) methodology for AI, with an application to fraud and anti-fraud structure and policymaking. The study highlights the potential of this "prosperity tripod" to contribute to positive societal change by addressing fraud and related issues, while acknowledging the challenges and risks involved in each technological component. Separately, Irungu (2019) investigated the effect of fraud mitigation strategies such as staff training, technology adoption, systems surveillance, and forensic auditing of internal controls on mitigating tax fraud among large taxpayers at the Kenya Revenue Authority (KRA). The study employed a descriptive research design, targeting 1540 fraud investigation officers in the Large Taxpayer Office Section. Data was collected from a proportional sample of 90 staff using questionnaires and analysed through multiple linear regression. The findings revealed that staff training, technology adoption, systems surveillance, and forensic auditing of internal controls had a positive and significant effect on mitigating tax fraud among large taxpayers at KRA. The studies' focus was more on the effect of anti-fraud policies on mitigating fraud risk than on revenue growth, which raises a problem in generalising the findings to other contexts.

2.4 Summary of the Literature and Research Gap(s)

Existing literature has thoroughly examined the impact of fraud on businesses, but there is a noticeable lack of focus on Small and Medium Sized Enterprises (SMEs) owned specifically by

women, presenting a conceptual research gap. Studies by Murrar (2020) and Ngah, Ismail and Hamid (2020) explored these aspects in a general manner. Understanding the unique attributes and needs of these enterprises is vital for targeted fraud prevention and crisis management.

Methodologically, most of the studies conducted on business fraud rely on quantitative methods, such as statistical analyses and large surveys. For instance, a study by Andoh, Quaye and Frimpong (2018) employed a cross-sectional regression model. While this offers a broad overview, it presents a limited understanding of what qualitative research methods could provide. There is a need for a balanced approach that combines both quantitative and qualitative research methods for a well-rounded understanding.

While there is considerable research on the impacts of fraud and fraud management practices on businesses at large, the specific context of women-owned SMEs has been largely overlooked. Starehe Sub County’s unique economic and social landscape, combined with the global crisis, could produce unique vulnerabilities or resilience factors that have not been studied yet. This study seeks to examine the effects of fraud risk management on revenue growth of Small and Medium-Sized Enterprises owned by women in Starehe post the COVID-19 pandemic. Table 2.1 shows the summary of research gaps.

Table 2.2: Summary of Empirical Literature and Research Gaps

Author & Year	Objective/Focus	Key Findings	Research Gaps	How the Study Will Address the Gaps
Hussaini, Bakar, & Yusuf (2019)	To examine the effect of fraud risk management, risk culture, and performance of the banking sector.	Fraud risk management positively impacts bank performance.	Conceptual gap: Focused on the banking sector. Contextual gap: Conducted in a different country.	This study will focus on SMEs owned by women in Kenya and assess the impact post the COVID-19 pandemic.
Mugo & Ngugi (2021)	To investigate the effect of fraud risk	Formal fraud risk assessment procedures	Conceptual gap: The focus of the study was on	This study will focus on the revenue growth

	assessment on the financial performance of SMEs in Nairobi County, Kenya.	improve financial performance in SMEs.	fraud risk assessment on the financial performance of SMEs in Nairobi County	of women-owned SMEs in Starehe Sub County.
Ngah, Ismail, & Hamid (2020)	To evaluate issues in tax evasion from fraudulent financial reporting amongst SMEs in Malaysia.	Family ownership and company size are significantly related to tax evasion practices.	Contextual gap: Conducted in Malaysia. Conceptual gap: Focused on tax evasion only.	This study will focus on fraud risk management in Kenyan SMEs owned by women.
Ahmad & Mohd (2019)	To investigate the role of fraud risk assessment in enhancing the financial performance of manufacturing firms in Malaysia.	Comprehensive fraud risk assessment improves financial performance.	Contextual gap: Focused on manufacturing firms. Methodological gap: Used mixed methods approach	This study will target SMEs owned by women in the Kenyan context using a descriptive design approach.
Othman & Ameer (2022)	To examine how employees commit fraud in New Zealand small businesses.	Trusted employees with multiple responsibilities have higher tendencies for fraud.	Contextual gap: Conducted in New Zealand. Methodological gap: Used document analysis.	This study will focus on SMEs in Kenya and use primary data collection methods.

Gupta & Gupta (2015)	To examine the perception and nature of fraud in India.	Identified various types of fraud, including financial, customer, employee, and supplier fraud.	Contextual gap: Conducted in India.	This study will examine similar fraud types in Kenyan SMEs owned by women.
Osei & Agyapong (2021)	To examine the impact of fraud detection practices on financial performance of SMEs in Accra, Ghana.	Effective fraud detection practices lead to higher revenue growth and profitability.	Contextual gap: Conducted in Ghana.	This study will focus on fraud detection in SMEs owned by women in Kenya.
Chong & Ahmad (2018)	To investigate the role of fraud detection in enhancing financial performance of manufacturing firms in Malaysia.	Robust fraud detection mechanisms improve financial performance.	Contextual gap: Focused on manufacturing firms in Malaysia.	This study will target SMEs owned by women in Kenya.
Sow et al. (2018)	To provide an overview of fraud risk among Malaysian SMEs.	SMEs face various fraud schemes, but few take actions to prevent them.	Contextual gap: Conducted in Malaysia. Conceptual gap: Focused on fraud schemes	This study will assess fraud risk management practices in Kenyan SMEs

			without addressing management practices.	owned by women.
Lowe & Reckers (2024)	To examine deterrents of complicity in fraudulent financial reporting.	Penalty whistleblowing provisions increase perceived reporting risk.	Methodological gap: Experimental design focusing on experienced business managers.	This study will use survey methods to gather data from SMEs in Kenya.
Andoh, Quaye, & Frimpong (2018)	To determine drivers of internal fraud and their impact on Ghanaian SMEs.	Stealing and fake currency are major fraud cases.	Contextual gap: Conducted in Ghana.	This study will focus on Kenyan SMEs owned by women.
Rehman & Hashim (2020)	To assess the impact of fraud risk assessment on corporate governance in Oman.	Effective fraud risk assessment enhances corporate governance.	Contextual gap: Conducted in Oman.	This study will focus on SMEs owned by women in Kenya.
Dagane (2024)	To examine the effect of internal controls on fraud detection in manufacturing firms in Garissa County, Kenya.	Effective internal controls improve fraud detection.	Contextual gap: Focused on manufacturing firms.	This study will target SMEs owned by women in Starehe Sub-County.

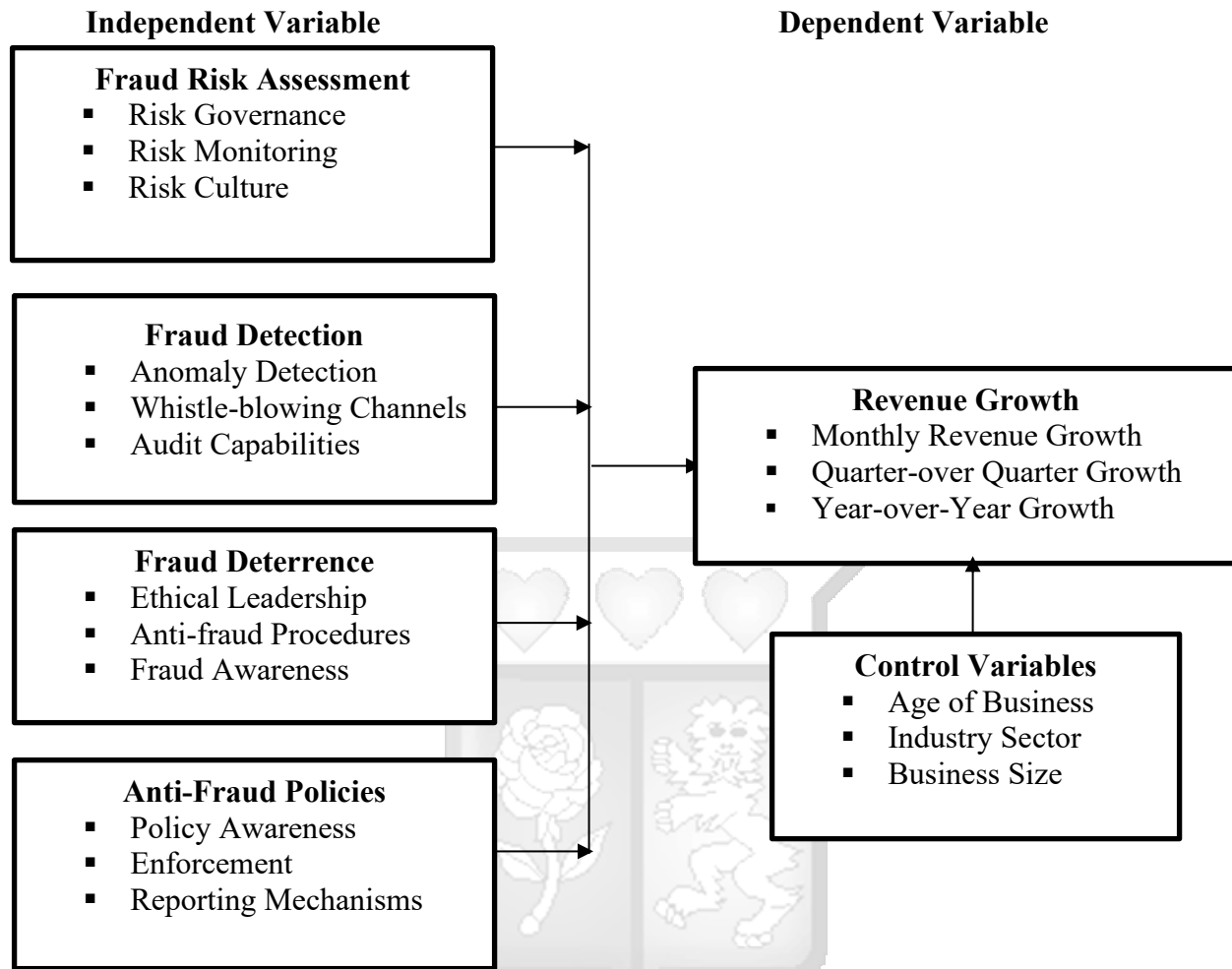
Shonhadji & Maulidi (2021)	To examine the roles of whistleblowing systems and fraud awareness in financial statement fraud deterrence.	Whistleblowing systems and fraud awareness deter financial statement fraud.	Conceptual gap: Focused on financial statement fraud.	This study will include broader fraud deterrence measures.
Taherdoost (2021)	To review risk management in information systems.	Identified key risk management practices.	Conceptual gap: Focused on information systems.	This study will focus on fraud risk management in the context of SMEs owned by women.

Source: Author (2024)

2.5 Conceptual Framework

To carry out this study, the study assumes the argument that related cases of fraud, operational risk areas prone to fraud as well as weak fraud mitigations measures affects the operations of SMEs owned by women. Fraud within SMEs is contributed by weak internal control systems that fail to detect fraudulent activities when they happen, hence affects the performance and growth of SMEs.

Figure 0-1: Conceptual Framework



Source: Author (2024)

2.6 Operationalisation of Variables

This study will operationalize the effect of fraud risk management on revenue growth of SMEs in Starehe Sub-County. The independent variables will be; fraud risk assessment, fraud detection, fraud deterrence and anti-fraud policies. The dependent variable will be revenue growth of SMEs.

Table 0-1: Operationalisation of Variables

Objective	Variable	Indicator	Measurement Scale	Supporting Literature
Revenue Growth	Dependent	<ul style="list-style-type: none"> ▪ Monthly Revenue Growth ▪ Quarter-over-Quarter Growth ▪ Year-over-Year Growth 	Interval scale	Hussaini, Bakar, & Yusuf (2019)
Fraud Risk Assessment	Independent	<ul style="list-style-type: none"> ▪ Risk Governance ▪ Risk Monitoring 	Nominal scale	Rehman & Hashim (2020); Ahmad &

Objective	Variable	Indicator	Measurement Scale	Supporting Literature
Revenue Growth	Dependent	<ul style="list-style-type: none"> ▪ Monthly Revenue Growth ▪ Quarter-over-Quarter Growth ▪ Year-over-Year Growth 	Interval scale	Hussaini, Bakar, & Yusuf (2019)
		<ul style="list-style-type: none"> ▪ Risk Culture 		Mohd (2019); Mugo & Ngugi (2021)
Fraud Detection	Independent	<ul style="list-style-type: none"> ▪ Anomaly Detection ▪ Whistle-blowing Channels ▪ Audit Capabilities 	Nominal scale	Dagane (2024) Chong & Ahmad (2018) Osei & Agyapong (2021)
Fraud Deterrence	Independent	<ul style="list-style-type: none"> ▪ Ethical Leadership ▪ Anti-fraud Procedures ▪ Fraud Awareness 	Nominal scale	Andoh, Quaye, & Frimpong (2018), Lowe & Reckers (2024)
Anti-Fraud Policies	Independent	<ul style="list-style-type: none"> ▪ Policy Awareness ▪ Enforcement ▪ Reporting Mechanisms 	Nominal scale	Shonhadji & Maulidi (2021) Lowe & Reckers (2024)

Source: Researcher (2025)

2.7 Chapter Summary

This chapter provides comprehensive theoretical and empirical reviews. The theoretical review focuses on two key theories: Fraud Diamond Theory and the Agency Theory. These theories form the foundation of the study's theoretical framework and establish its academic positioning. The empirical review, which is anchored on the study's objectives, synthesises literature on the topic to identify what is known and unknown. Through this analysis, the chapter highlights significant knowledge and methodological gaps that justify the need for the current study. The chapter concludes with the presentation of a conceptual framework, which illustrates the relationships between key variables and guides the operationalisation of the study.

CHAPTER THREE – RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology, which was employed to examine the effects of fraud risk management on revenue growth of SMEs owned by women in Starehe Sub-County, Nairobi County, Kenya. This chapter discusses the methodology used to answer the research objectives, including the research design, research population, sampling process, data collection procedure, data analysis methods, research quality and ethical consideration.

3.2 Research Philosophy

Research philosophy relates to the development of knowledge and the nature of that knowledge and contains important assumptions about how researchers view the world (Saunders, Lewis & Thornhill, 2007). There are two extreme philosophical views regarding knowledge and reality, namely Positivism and Phenomenology. Phenomenology is a science-based philosophy anchored on the fact that reality consists of events and objects, focuses on the immediate experience (Padilla-Díaz, 2015), and emphasises the subjectivity of the researcher and the participant. This study adopted a positivist approach. Positivism is a theory of knowledge that focuses on facts and how variables under study cause each other by testing hypotheses. Positivistic research is undertaken in a value-free way as the researcher is external to the process of data collection, as there is little that can be done to alter the substance of the data collected (Saunders *et al.*, 2007). The researcher is independent of and neither affects nor is affected by the subject of the research (Park, Konge & Artino, 2020). Emphasis is on quantifiable observations that lend themselves to statistical analysis.

The positivist philosophy was adopted based on Bryman (2012) assertion that positivism is grounded on the principle of deduction whereby research questions are first derived from theory, followed by data collection and empirically testing the data to accept or reject the hypotheses. As such the study involved a thorough review of literature, formulation of research questions, statistical tests, and generalization of findings. Consequently, mergers and acquisitions represented the system through which financial performance phenomena were observed. Positivism is based on the idea that scientific knowledge can be obtained through observation and experimentation (Marsonet, 2019).

3.3 Research Design

This research employed descriptive research designs and methods to investigate the effects of fraud risk management on revenue growth of SMEs owned by women in Starehe Sub-County, Nairobi County. In descriptive research designs, the descriptive methods are used in systematic ways of analysing academic sources, collecting and analysing primary data and generalization to answer the question of what, where, when and how of the existence of phenomenon's as it is (Crowther & Lancaster, 2008; Yin, 2013; Cooper & Schindler, 2014).

3.4 Population and Sampling

The study's population of interest comprised registered women-owned SMEs within Starehe Sub-County. Available information indicates that there is a total of 1,016 registered SMES within Starehe Sub-County in Nairobi County as of December 2020, out of which 612 are owned by women in Starehe Sub-County licensing department in the year 2020 (KNBS, 2020).

According to Mugenda and Mugenda (2013), sampling means selecting a given number of subjects from a defined population as a representative of the whole population. The study targeted a population of 612 women-owned SMEs in Starehe Sub-County, which represented the sampling frame from which the desired number of subjects was selected for the study. According to Jung (2014), the modified stratified Fisher's exact test formula can be used to calculate the required minimum sample size when the population is less than 10,000 units. The modified version of Jung (2014) stratified Fisher's exact test formula is as in equation (i) below.

$$n = \frac{z^2 p(1-p)}{e^2} \dots\dots\dots (i)$$

Where: n = desired sample size for a population of more than 10,000 units

Z = is the standard normal confidence level set at 95% with a standard value of 1.96

p = is the proportion of the target population

e = standard margin of error at 5%

However, when the population is less than 10,000 units, a modified the stratified Fisher's exact test formula is as follows in equation (ii) below

$$n = \frac{\tilde{n}N}{(N-1)+\tilde{n}} \dots\dots\dots (ii)$$

Where:

\tilde{n} Is the sample size for the finite population with the correction factor

n represents the new adjusted sample size

Hence, a minimum sample size of 236 units was considered scientifically appropriate.

3.5 Data Collection Methods

This research relied on primary data, which was purely quantitative. The data was collected directly from randomly selected respondents within Starehe Sub-County on various aspects of variables such as several cases of fraud experienced, key areas prone to fraud and measures put in place to mitigate fraud. As such, primary data was perceived as more objective, reliable and authentic. The data was collected using structured questionnaires. The questionnaire was adapted from previous studies, with relevant changes being made to fit the context of the current study. To ensure the integrity and accuracy of the data collected, the data was cleaned to identify and correct any outliers, including inaccurate or incomplete responses, before analysis. This was essential in improving the quality of the responses to keep and maintain quality research evidence.

3.6 Data Analysis

Data analysis, according to Zikmund et al. (2010), is the use of reasoning to comprehend the data that has been obtained to identify recurring patterns and condense the pertinent information discovered throughout the research. Quantitative analysis of data from the questionnaires was conducted to provide descriptive and correlation statistics of demographic information, and then the data was analysed using descriptive categories such as central-tendency measures.

A regression analysis was also performed to establish the influence of corporate social responsibility on customer trust among commercial banks in Kenya. The data was analysed using SPSS software. The particular inferential statistic adopted was the multiple regression model. To determine the overall model significance, the analysis of variance was examined. The significance of the different variables was assessed using a critical p value of 0.05. Graphs and tables were used to display the outcome of the results.

The study also conducted multiple linear regression analysis, where the following multiple linear regression model was used.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \epsilon_{it}$$

Where;

Y = Revenue Growth

X₁ = Fraud Risk Assessment

X₂ = Fraud Detection

X₃ = Fraud Deterrence

X₄ = Ant-Fraud Policies

X₅ = Age of Business

X₆ = Industry Sector

X₇ = Business Size

In the model, β_0 = the constant term, while the coefficient $\beta_i = 1 \dots 7$ was to measure the sensitivity of the dependent variable (Y) to a unit change in the predictor variables X₁, X₂, X₃ and X₄, X₅, X₆, X₇. The error (ϵ) term captures the unexplained variations in the model.

3.7 Research Quality

3.7.1 Validity

Face construct and content validity were measured by seeking the opinion of lecturers and other professionals on the adequacy of the research instruments in achieving the objectives of the study. Based on their opinions, the instrument was adjusted by deleting and adding some questions or by changing the structure or lexical density of questions as appropriate (Saunders, Lewis, & Thornhill, 2009). Validity is essential to this research as it determines the kind of questions to use in a research tool that truly measure the variable of interest.

3.7.2 Reliability and Objectivity of the Research

The Cronbach reliability test using SPSS was conducted to establish the reliability of the responses from the respondents. Cronbach's reliability is viewed as an average of the correlations of the different test items against each other, with its coefficients ranging from .00 to 1.00 (Segal & Coolidge, 2019). A study is reliable if the results of a study can be reproduced under a similar methodology (Yin, 2013). Crude information from the instruments was subjected to an unwavering quality investigation from which Cronbach's coefficient alpha was methodically, systematically and consistently computed using Cronbach's Alpha (Yin, 2013). An unwavering quality of 80% was viewed as dependable for information accumulation.

Table 3.1 below shows the results of the reliability test.

Table 3.1: Reliability Test

Variable	Cronbach's Alpha
Fraud Risk Assessment	.861
Fraud Detection	.929
Fraud Deterrence	.888
Anti-Fraud Polices	.903

Revenue Growth	.923
Overall reliability (N=23)	.823

Source: Researcher (2025)

From the above reliability results, the overall Cronbach's alpha is 0.823, which shows that the research tool was consistent and thus reliable. Moreover, fraud risk assessment (0.861), fraud detection (0.929), fraud deterrence (0.888), anti-fraud polices (0.903), and the dependent variable (revenue growth (0.923) have alpha values within the range of 0.50 to 1. This indicated that the tool was reliably consistent.

3.8 Ethical Issues in Research

The researcher ensured confidentiality and anonymity, sought participants' consent, and maintained research originality during the study. Confidentiality was enhanced by excluding respondents' names from the research instrument. Informed consent was sought from the respondents, and one was allowed to drop their participation in the study at any stage of their response to the questions contained in the data collection tool. Sampled participants were allowed to voluntarily participate in the study. Considering that the credibility of research is very critical, the researcher did not allow or engage in any form of dishonesty, fabrication, plagiarism or any other unethical conduct during the research, and where necessary, consent was sought. Finally, the researcher obtained Ethical clearance to conduct the study from the Strathmore University Institutional Ethics Review Committee (SU-ISERC) and sought permission from the National Commission for Science, Technology, and Innovation (NACOSTI) before embarking on data collection.

3.9 Chapter Summary

This chapter outlines the research methodology applied in the study. It presents the research philosophy, the research design, the target population, the sampling techniques, and the sample size. The data collection methods and data analysis procedures are also presented. Furthermore, the chapter addresses issues related to research quality, focusing on reliability and validity. Lastly, the chapter examines the potential ethical considerations of the study, ensuring that all research activities were conducted in a manner that respects the rights and well-being of participants.

CHAPTER FOUR – PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The fourth chapter was utilized in the presentation of the findings from the collected research data from the field work. The study primarily applied quantitative analysis approaches. The main sections focused on the background profile, descriptive analysis, correlation and regression analysis. Lastly, a chapter summary was presented.

4.2 Background Information

The background information analysed the profile of the respondents and the women-owned SMEs that were the focus of the survey, as well as the response rate achieved from the fieldwork.

4.2.1 Response Rate

The data collection process, conducted between February and March 2025, involved a distribution of 236 questionnaires consistent with the sample size. The questionnaires were distributed online, targeting women SME owners in Starehe Sub-County, Kenya. Fortunately, all the 236 questionnaires distributed were filled out, indicating a 100% response rate. The responses collected provided a diverse representation of women-owned SMEs, ensuring meaningful insights into the effect of fraud risk management. The response rate was considered adequate for reliable data analysis and interpretation, allowing for generalizable findings across the study population.

4.2.2 Profile of the Respondents

The study sought to understand the demographic distribution of the respondents. A summary of the respondent profile was presented in Table 4.1.

Table 0-1: Respondents Profile

		Frequency	Percent
Age Group	18-25	119	49.38
	36-45	67	27.80
	46-55	43	17.84
	56-65	9	3.73
	66 and above	3	1.25
	Total		236
Business Size (KES)	500,000-1,400,000	77	31.95
	1,400,000-2,300,000	53	21.99
	2,300,000-3,200,000	48	19.92
	3,200,000-4,100,000	42	17.43
	4,100,000-5,000,000	21	8.71
	Total		236
Industry Sector	Accommodation and Food	64	26.56

	Administration, Support and other services	29	12.03
	Financial and Insurance	53	21.99
	Manufacturing	20	8.30
	Wholesale and retail trade	75	31.12
	Total	236	100.0
Education Level	Secondary Education	49	20.33
	Certificate/Diploma	121	50.21
	Bachelor's Degree	67	27.80
	Masters	3	1.24
	PhD	1	0.42
	Total	236	100.0
Period of Operation	Less than 1 year	23	9.54
	1 – 2 years	68	28.22
	3 – 5 years	83	34.44
	6 -10 years	44	18.26
	More than 10 years	23	9.54
	Total	236	100.0

Source: Researcher (2025)

The analysis showed that 49.38% of respondents were aged 18-25 years, followed by 27.80% in the 36-45 years category. A smaller proportion of 17.84% were aged 46-55 years, while 3.73% fell within 56-65 years, and 1.25% were 66 years and above. This indicates that most women entrepreneurs in Starehe are young, possibly due to limited formal employment opportunities or a preference for self-employment. The lower representation of older entrepreneurs may be due to retirement or business sustainability challenges. These findings highlight the need for mentorship and financial literacy training for younger entrepreneurs, while older business owners require sustainability strategies to ensure long-term success.

Regarding business size, most SMEs (31.95%) had an annual revenue between KES 500,000 - 1,400,000, followed by 21.99% with revenues between KES 1,400,000 - 2,300,000. The lowest proportion (8.71%) reported revenues between KES 4,100,000 - 5,000,000. These findings suggest that most women-owned SMEs in Starehe operate within the lower revenue brackets, which may limit their ability to invest in fraud risk management systems. Businesses with lower revenues may have weaker financial controls, increasing their vulnerability to fraudulent activities.

In terms of industry sector, the highest proportion of businesses belonged to the wholesale and retail trade sector (31.12%), followed by accommodation and food services (26.56%), and financial and insurance services (21.99%). The manufacturing sector had the lowest representation (8.30%), indicating that most women entrepreneurs in Starehe Sub-County engage in service-

based industries rather than capital-intensive ventures. This distribution highlights the need for policy interventions and funding programs that encourage women to participate in high-growth industries such as manufacturing and technology.

Concerning education level, the highest proportion of respondents (50.21%) had a certificate or diploma, followed by 27.80% with a bachelor's degree. Only 20.33% had completed secondary education, while 1.24% had a master's degree, and 0.42% had a PhD. These findings suggest that most SME owners in Starehe have basic or mid-level education, which may affect their ability to adopt complex fraud risk management strategies. The low proportion of master's and PhD holders indicates that fewer highly educated individuals are venturing into entrepreneurship, possibly due to a preference for formal employment. This highlights the importance of business training programs focused on financial literacy and fraud prevention for women entrepreneurs, particularly those with lower education levels.

The study also examined the period of business operation. The results revealed that 34.44% of businesses had been in operation for 3-5 years, while 28.22% had been running for 1-2 years. A smaller proportion (18.26%) had been in business for 6-10 years, while 9.54% had been operating for less than 1 year or more than 10 years. These findings suggest that while a significant number of businesses sustain operations beyond the startup phase, fewer remain operational beyond a decade. This emphasises the need for long-term support programs, including financial management training and fraud risk management strategies, to enhance business longevity for women entrepreneurs.

4.3 Descriptive Statistics

4.3.1 Revenue Growth

The results in Table 4.2 present the descriptive statistics for revenue growth among women-owned SMEs across two post-COVID years (2023 and 2024), using three continuous financial metrics: monthly revenue growth, quarter-over-quarter (Q-o-Q) revenue growth, and year-over-year (Y-o-Y) revenue growth. In 2023, the average monthly revenue growth was 6.59% (SD = 1.06), Q-o-Q growth averaged 13.62% (SD = 2.25), and Y-o-Y growth was 32.39% (SD = 7.51). The corresponding medians were 7%, 14%, and 32%, respectively. In 2024, all three growth metrics increased slightly, with monthly revenue growth rising to a mean of 7.44% (SD = 1.66), Q-o-Q growth to 15.04% (SD = 3.22), and Y-o-Y growth to 35.71% (SD = 8.95). The medians also rose to 8%, 15%, and 36%, respectively. These findings suggested that revenue performance among

SMEs improved in 2024 compared to 2023, reflecting post-pandemic business recovery and greater financial stability.

Table 0-2: Revenue Growth

Measure	2023			2024		
	Monthly Revenue Growth (%)	Q-o-Q Revenue Growth (%)	Y-o-Y Revenue Growth (%)	Monthly Revenue Growth (%)	Q-o-Q Revenue Growth (%)	Y-o-Y Revenue Growth (%)
Count	236	236	236	236	236	236
Median	7	14	32	8	15	36
Mean	6.5851	13.6183	32.3900	7.4398	15.0415	35.7137
Std. Deviation	1.0617	2.2480	7.5137	1.6600	3.2220	8.9492

Source: Researcher (2025)

Table 4.3 further supplemented this analysis by capturing participants' perceptions of revenue growth using the following 5-point Likert scale adopted in the interpretation of the findings: (5.00-4.21) indicated strongly agree, (4.20-3.41) indicated agree, (3.40-2.61) indicated moderate agreement, (2.60-1.81) indicated disagreement, and (1.80-1.00) indicated strong disagreement. The mean score for whether businesses experienced revenue growth during the pandemic was 2.06 (Median = 2.00, SD = .998), indicating disagreement. Respondents agreed that implementing fraud risk management practices contributed to revenue growth (M = 3.87, Median = 4.00, SD = 1.10) and agreed that revenue growth was driven by effective fraud detection and deterrence (M = 3.92, Median = 4.00, SD = 1.06). Similar agreement was recorded regarding the influence of strong anti-fraud policies (M = 3.99, Median = 4.00, SD = 1.04), regular fraud risk assessments (M = 3.94, Median = 4.00, SD = 1.05), and the overall impact of fraud risk management on revenue (M = 3.96, Median = 4.00, SD = 1.12). On average, the revenue growth rating was 3.60 (SD = .4354). According to the adopted interpretation scale, the average revenue rating was within the “Agree” range (3.41–4.20), highlighting a generally positive perception of how fraud mitigation practices influenced business performance. These results suggested that proactive fraud risk management was associated with improved revenue growth among women-owned SMEs.

Table 0-3: Revenue Growth Rating

	N	Mean	Std. Deviation	Median
Our business has experienced revenue growth during the pandemic.	236	2.060	.998	2.000
Implementing fraud risk management practices has contributed to our revenue growth.	236	3.870	1.096	4.000
Our revenue growth is a result of effective fraud detection and deterrence measures.	236	3.920	1.063	4.000
Strong anti-fraud policies have positively impacted our revenue growth.	236	3.990	1.044	4.000
Regular fraud risk assessments have led to significant revenue growth.	236	3.940	1.050	4.000
Fraud risk management has had a positive impact on our revenue growth.	236	3.960	1.122	4.000
Average of Revenue Growth	236	3.620	.4354	4.000

Source: Researcher (2025)

4.3.2 Fraud Risk Assessment

This section examined the extent to which respondents rated fraud risk assessment on SME revenue growth. It assessed whether businesses conducted fraud risk assessments, the effectiveness of these assessments, and their contribution to revenue growth. The study employed median, mean and standard deviations in the analysis, with the following 5-point Likert scale adopted in the interpretation of the findings: (5.00-4.21) indicated strongly agree, (4.20-3.41) indicated agree, (3.40-2.61) indicated moderate agreement, (2.60-1.81) indicated disagreement, and (1.80-1.00) indicated strongly disagreement.

Table 0-4: Fraud Risk Assessment

	N	Median	Mean	Std. Deviation
We regularly assess fraud risk within our organisation to safeguard revenue growth	236	5.000	4.7463	.55909
Our business has implemented systematic fraud risk assessment procedures during the pandemic.	236	5.000	4.5187	.62639
Fraud risk assessment has helped us identify potential fraud areas affecting revenue growth.	236	5.000	4.5228	.56319
Regular fraud risk assessments have minimised fraud-related losses in our business.	236	5.000	4.5436	.57660
Our organisation prioritises fraud risk assessment to ensure financial stability	236	5.000	4.6473	.55159
We believe that thorough fraud risk assessments contribute to revenue growth	236	5.000	4.5809	.57254

Average on Fraud Risk Assessment	236	5.000	4.182	.6677
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Source: Researcher (2025)

The results in Table 4.4 showed that there was consistently strong agreement among respondents regarding the role of fraud risk assessment in supporting SME revenue growth. Median scores across all items were 5.000, indicating that most participants had rated their agreement at the highest level on the scale. For instance, respondents indicated that they regularly assessed fraud risk to safeguard revenue growth (Median = 5.000, M = 4.75, SD = 0.56), and confirmed the implementation of systematic fraud risk assessments during the pandemic (Median = 5.000, M = 4.52, SD = 0.63), which suggested increased vigilance in response to external shocks. Participants also acknowledged that fraud risk assessments had been effective in identifying areas vulnerable to fraud (Median = 5.000, M = 4.52, SD = 0.56) and in reducing fraud-related losses (Median = 5.000, M = 4.54, SD = 0.58). There was also strong agreement that prioritising fraud risk assessments had contributed to financial stability (Median = 5.000, M = 4.65, SD = 0.55) and that thorough assessments had supported revenue growth (Median = 5.000, M = 4.58, SD = 0.57). On average, fraud risk assessments had a mean of 4.18 (SD = .67, Median 5.000), which was within the agree range (4.20-3.41).

From the average rating of fraud risk assessment (M = 4.18, SD = .67), it was conclusive that SMEs with a culture of regular and systematic fraud risk assessment had experienced great financial performance and resilience. This indicated that investing in digital risk assessment systems and targeted training to enhance fraud detection capabilities led to improved long-term revenue growth and financial security among women-owned SMEs in Kenya.

4.3.3 Risk Detection

This section examined the extent to which fraud detection mechanisms influenced SMEs' revenue growth. It assessed whether businesses had fraud detection systems, how frequently these systems were updated, and their effectiveness in minimising financial losses. The study employed median, mean and standard deviations in the analysis, with the following 5-point Likert scale adopted in the interpretation of the findings: (5.00-4.21) indicated strongly agree, (4.20-3.41) indicated agree, (3.40-2.61) indicated moderate agreement, (2.60-1.81) indicated disagreement, and (1.80-1.00) indicated strongly disagreement.

Table 0-5: Fraud Detection

	N	Median	Mean	Std. Deviation
We have effective fraud detection mechanisms in place to protect revenue growth.	236	3.000	3.1121	1.02464
Our fraud detection systems are regularly updated to address emerging fraud threats.	236	3.000	3.0041	1.00207
Effective fraud detection has significantly reduced financial losses during the pandemic.	236	3.000	3.2199	1.00694
We invest in advanced technology for timely fraud detection.	236	3.000	2.9585	0.95652
Our employees are trained to detect and report fraudulent activities.	236	3.000	2.9378	1.09937
Continuous improvement in fraud detection has positively impacted our revenue growth.	236	3.000	2.9004	1.13213
Average of Fraud Detection	236	3.000	2.9232	.66387

Source: Researcher (2025)

The results in Table 4.5 showed moderate agreement among respondents regarding the presence and effectiveness of fraud detection mechanisms in protecting SME revenue growth. Median scores across all items were 3.000, indicating neutral to moderate levels of agreement. Respondents moderately agreed that they had effective fraud detection mechanisms in place to protect revenue growth (Median = 3.000, M = 3.11, SD = 1.02), suggesting that while some businesses had fraud detection measures, these systems were not fully optimised, resulting in potential gaps in preventing financial fraud. Similarly, respondents reported that their fraud detection systems were regularly updated to address emerging threats (Median = 3.000, M = 3.00, SD = 1.00), highlighting the need for continuous improvement in detection strategies. Respondents also noted that effective fraud detection had significantly reduced financial losses during the pandemic (Median = 3.000, M = 3.22, SD = 1.01), indicating that businesses with active detection mechanisms had been better positioned to mitigate risks during economic uncertainty. However, the relatively low score for investment in advanced fraud detection technologies (Median = 3.000, M = 2.96, SD = 0.96) revealed that many SMEs lacked either financial capacity or awareness to adopt modern tools. Likewise, training employees to detect and report fraudulent activities was rated low (Median = 3.000, M = 2.94, SD = 1.10), pointing to a deficiency in fraud awareness and training within many SMEs. Additionally, continuous improvement in fraud detection was

perceived to have had a limited impact on revenue growth (Median = 3.000, M = 2.90, SD = 1.13), suggesting that fraud detection was not strongly emphasised as a strategic financial management approach. As shown, the average rating for fraud detection was 2.92 (SD = .66), which was within the moderate agreement range. Thus, it was evident that while women-owned SMEs have adopted fraud detection measures, these strategies are not effective enough in deterring financial fraud and improving revenue growth. This finding underscored the need for women-owned SMEs in Kenya to enhance their fraud detection mechanisms by investing in advanced monitoring tools, employee training, and early warning systems to reduce financial vulnerabilities.

4.3.4 Fraud Risk Deterrence

This section examined the extent to which respondents agreed that fraud deterrence mechanisms influenced SMEs' revenue growth. It assessed whether businesses had strong fraud deterrence policies, how frequently they were communicated, and their effectiveness in preventing fraudulent activities. The study employed median, mean and standard deviations in the analysis, with the following 5-point Likert scale adopted in the interpretation of the findings: (5.00-4.21) indicated strongly agree, (4.20-3.41) indicated agree, (3.40-2.61) indicated moderate agreement, (2.60-1.81) indicated disagreement, and (1.80-1.00) indicated strongly disagreement.

Table 0-6: Risk Deterrence

	N	Median	Mean	Std. Deviation
We have strong policies in place to deter fraud and protect revenue growth.	236	3.000	3.0705	1.08359
Fraud deterrence measures are regularly communicated to all employees.	236	3.000	2.9959	0.97253
Our deterrence strategies effectively prevent fraudulent activities.	236	3.000	3.0954	1.01408
We have established severe consequences for fraudulent actions.	236	4.000	3.4606	1.09140
Fraud deterrence practices have contributed to maintaining our revenue levels.	236	3.000	3.1452	1.05261
Consistent fraud deterrence has improved our business's financial performance.	236	3.000	3.0581	1.11652
Average Of Fraud Risk Deterrence	236	3.000	3.1210	.58293

Source: Researcher (2025)

The results in Table 4.6 showed moderate agreement among respondents regarding the role of fraud deterrence in supporting SME revenue growth. Median scores for most items were 3.000, indicating a neutral to moderate level of agreement across the board, with only one item reaching

a slightly higher median of 4.000. Respondents moderately agreed that their businesses had strong policies in place to deter fraud and protect revenue (Median = 3.000, M = 3.07, SD = 1.08), and that fraud deterrence measures were regularly communicated to employees (Median = 3.000, M = 2.99, SD = 0.97), suggesting gaps in internal communication and awareness. Similarly, there was moderate agreement that deterrence strategies were effective in preventing fraudulent activities (Median = 3.000, M = 3.10, SD = 1.01). Respondents more strongly agreed that their organisations had established severe consequences for fraudulent actions (Median = 4.000, M = 3.46, SD = 1.09), pointing to the role of punitive policies as a key deterrent mechanism. Moreover, participants agreed that deterrence practices had contributed to maintaining revenue levels (Median = 3.000, M = 3.15, SD = 1.05) and that consistent deterrence had improved financial performance to a moderate extent (Median = 3.000, M = 3.06, SD = 1.12). On average, fraud risk deterrence had a rating of 3.12, which was within the moderate agreement range (3.40-2.61). This finding established that while some SMEs had structured fraud deterrence mechanisms, others had taken a reactive approach in implementing measures only after experiencing financial losses. Therefore, this reactive stance increased their exposure to recurring fraud incidents, underscoring the need for women SME owners to adopt proactive fraud deterrence frameworks, integrate digital fraud monitoring tools, and enforce stronger legal and operational consequences for fraudulent behaviour.

4.3.5 Anti-Fraud Policies

This section assessed the extent to which anti-fraud policies contributed to SMEs' revenue growth. It examined whether businesses had comprehensive anti-fraud policies, how strictly they were enforced, and their overall effectiveness in reducing fraudulent activities. The study employed median, mean and standard deviations in the analysis, with the following 5-point Likert scale adopted in the interpretation of the findings: (5.00-4.21) indicated strongly agree, (4.20-3.41) indicated agree, (3.40-2.61) indicated moderate agreement, (2.60-1.81) indicated disagreement, and (1.80-1.00) indicated strongly disagreement.

Table 0-7: Anti-Fraud Policies

	N	Median	Mean	Std. Deviation
We have comprehensive anti-fraud policies that support revenue growth.	236	4.000	3.6639	1.01196
Our anti-fraud policies are strictly enforced within the organisation.	236	4.000	3.6639	.97847

Employees are well-informed about our anti-fraud policies and procedures.	236	4.000	4.0290	1.01406
Regular reviews of anti-fraud policies enhance their effectiveness.	236	4.000	3.9004	.96526
Anti-fraud policies have reduced the incidence of fraud in our business.	236	4.000	3.9170	.98814
Implementing strong anti-fraud policies has positively impacted our revenue growth.	236	4.000	3.9212	1.00727
Average Rating for Anti-Fraud Policies	236	4.000	3.9461	.41816

Source: Researcher (2024)

The results in Table 4.7 showed that there was consistent agreement among respondents regarding the contribution of anti-fraud policies to SME revenue growth. Median scores across all items were 4.000, indicating that most participants rated their agreement at a relatively high level on the scale. For instance, respondents acknowledged that their businesses had comprehensive anti-fraud policies supporting revenue growth (Median = 4.000, M = 3.66, SD = 1.01), and confirmed that these policies were strictly enforced within their organizations (Median = 4.000, M = 3.66, SD = 0.98), though this suggested some variation in enforcement. Respondents strongly agreed that employees were well-informed about anti-fraud policies and procedures (Median = 4.000, M = 4.03, SD = 1.01) and that regular policy reviews enhanced their effectiveness (Median = 4.000, M = 3.90, SD = 0.97). There was further agreement that the implementation of anti-fraud policies had reduced fraud incidents (Median = 4.000, M = 3.92, SD = 0.99) and positively impacted revenue growth (Median = 4.000, M = 3.92, SD = 1.01). On average, anti-fraud policies had a rating of 3.95 (SD = .42), which was within the agree range (4.20-3.41). Based on this average, it was conclusive that women-owned SMEs that had adopted and maintained strong anti-fraud frameworks were more likely to experience improved financial performance and reduced exposure to fraud-related risks. It also revealed that while anti-fraud policies were widely adopted, some SMEs lacked industry-specific fraud prevention frameworks tailored to their business operations.

4.4 Factor Analysis

As most of the indicators used in this study were adapted from prior empirical research, it was essential to conduct an Exploratory Factor Analysis (EFA) to assess the underlying structure and confirm the unidimensionality of the constructs (Hair et al., 2019). EFA was performed on each multi-item construct using the principal component analysis (PCA) and varimax rotation method to extract and rotate the factors appropriately (Hair et al., 2019). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded a value of 0.893, while Bartlett's Test of Sphericity was

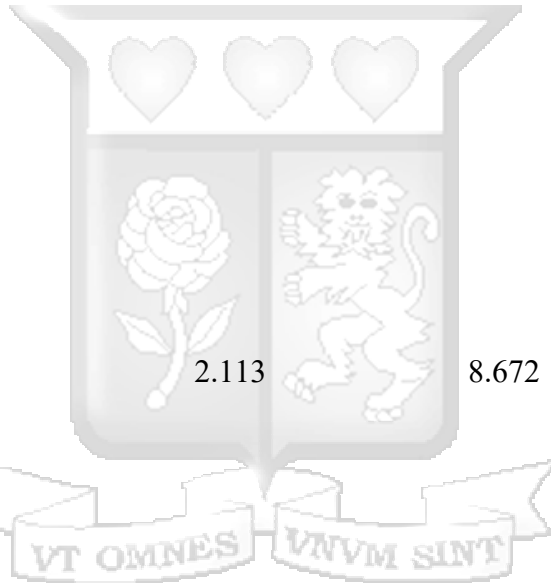
statistically significant at $\chi^2 = 1379.316$; $df = 435$; $p < .001$, indicating that the data was suitable for factor analysis. The EFA results revealed that the component values cumulatively explained 81.74% of the total variance in the dataset. Fraud Detection emerged as the most dominant construct, accounting for 28.921% of the total variance, with an Eigenvalue of 4.327 and the strongest factor loading on FD1 (0.908). Revenue Growth followed with an Eigenvalue of 3.724 and explained 18.335% of the variance, with RG3 having the highest loading at 0.932. Anti-Fraud Policies explained 16.543% of the variance with an Eigenvalue of 3.881, and its strongest item loading was AFP4 (0.917). Fraud Risk Assessment contributed 9.269% (Eigenvalue = 2.204), with FRA1 having the highest factor loading of 0.867. Fraud Deterrence accounted for 8.672% of the variance (Eigenvalue = 2.113), with the highest item loading observed in FDT4 (0.879). These values demonstrated the distinctiveness and strength of each construct in explaining variance within the dataset.

In terms of internal consistency, all constructs reported Cronbach's alpha (α) values above the acceptable reliability threshold of 0.80, confirming that the scale items demonstrated strong internal consistency. Specifically, the reliability coefficients were 0.929 for Fraud Detection, 0.923 for Revenue Growth, 0.903 for Anti-Fraud Policies, 0.888 for Fraud Deterrence, and 0.861 for Fraud Risk Assessment. The overall reliability for the full scale was 0.823. Additionally, to assess the potential for common method bias (CMB), Harman's single-factor test was applied. The test revealed that a single factor extracted 12.721 eigenvalues, accounting for 60.681% of the total variance extracted, which was within an acceptable range and did not suggest serious concern for CMB. These are shown in Table 4.8.

Table 0-8: Exploratory Factor Analysis

	Factor Loading	Eigen Value	%variance explained	Cronbach alpha (α)
Revenue Growth		3.724	18.335	.923
RG1	0.902			
RG2	0.899			
RG3	0.932			
Fraud Risk Assessment		2.204	9.269	.861

FRA1	.867			
FRA2	.809			
FRA3	.845			
FRA4	.814			
FRA5	.833			
FRA6	.837			
Fraud Detection		4.327	28.921	.929
FD1	.908			
FD2	.886			
FD3	.878			
FD4	.887			
FD5	.855			
FD6	.861			
Fraud Deterrence		2.113	8.672	.888
FDt1	.872			
FDt2	.853			
FDt3	.833			
FDt4	.879			
FDt5	.821			
FDt6	.856			
Anti-Fraud Policies		3.881	16.543	.903
AFP1	.910			
AFP2	.888			
AFP3	.908			



AFP4	.917
AFP5	.900
AFP6	.898

Totals **81.74**

Common method bias (CMB): Single factor extracted 12.721 eigenvalues, corresponding to 60.681% total variance extracted.
 Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .893; Bartlett's Test of Sphericity: Chi-square = 1379.316; d.f. = 435; p-value = .000
 Overall Reliability Cronbach alpha (α) = .823

4.5 Correlation Analysis

The correlation analysis measures the direction and degree of association between two or more variables. Table 4.9 presents the correlation findings, based on Spearman's rank correlation coefficient, a non-parametric measure suitable for ordinal data. According to Saunders et al. (2019), correlation values range from -1 to +1, where -1 indicates a perfect negative correlation, +1 represents a perfect positive correlation, and 0 signifies no correlation. Values below 0.3 suggest a weak correlation, values between 0.3 and 0.5 indicate a moderate correlation, and values above 0.5 signify a strong relationship. The significance level was set at 0.01 ($p < 0.01$) to determine statistically significant relationships. The correlation matrix is presented in Table 4.8.

Table 0-9: Correlation Matrix

			Revenue Growth	Fraud Risk Assessment	Fraud Detection	Fraud Deterrence	Anti-Fraud Policies
Spearman's rho	Revenue Growth	Correlation Coefficient	1.000				
		Sig. (2-tailed)	.				
		N	236				
Fraud Risk Assessment	Risk Assessment	Correlation Coefficient	.792**	1.000			
		Sig. (2-tailed)	.000	.			
		N	236	236			
Fraud Detection	Fraud Detection	Correlation Coefficient	.691**	.646**	1.000		
		Sig. (2-tailed)	.000	.000	.		
		N	236	236	236		
Fraud Deterrence	Fraud Deterrence	Correlation Coefficient	.597**	.682**	.606**	1.000	
		Sig. (2-tailed)	.000	.000	.000	.	
		N	236	236	236	236	

Anti-Fraud Policies	Correlation Coefficient	.780**	.596**	.702**	.684**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	236	236	236	236	236

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

Source: Researcher (2025)

The correlation analysis revealed strong and statistically significant positive relationships among all study variables. The results indicated that Fraud Risk Assessment had a strong positive correlation with Revenue Growth ($\rho = 0.792$, $p < 0.01$), suggesting that SMEs that prioritise fraud risk assessment experience better financial outcomes by identifying and mitigating fraud risks. Similarly, Fraud Detection showed a strong positive correlation with Revenue Growth ($\rho = 0.691$, $p < 0.01$), implying that effective fraud detection mechanisms help prevent financial losses, leading to improved revenue stability. Fraud Deterrence demonstrated a moderate positive correlation with Revenue Growth ($\rho = 0.597$, $p < 0.01$), indicating that while fraud deterrence measures contribute to revenue protection, they may not be as directly impactful as fraud assessment and detection. However, Fraud Deterrence exhibited strong correlations with both Fraud Risk Assessment ($\rho = 0.682$, $p < 0.01$) and Fraud Detection ($\rho = 0.606$, $p < 0.01$), suggesting that deterrence strategies reinforce risk assessment and detection in ensuring financial security. Additionally, Anti-Fraud Policies showed a strong positive correlation with Revenue Growth ($\rho = 0.780$, $p < 0.01$), highlighting that SMEs with structured anti-fraud policies are more likely to sustain financial stability. Anti-Fraud Policies were also strongly correlated with Fraud Detection ($\rho = 0.702$, $p < 0.01$) and Fraud Deterrence ($\rho = 0.684$, $p < 0.01$), suggesting that SMEs with comprehensive anti-fraud policies tend to implement robust fraud detection and deterrence mechanisms. Furthermore, Fraud Risk Assessment and Anti-Fraud Policies were positively correlated ($\rho = 0.596$, $p < 0.01$), reinforcing the notion that SMEs that actively assess fraud risks also establish preventive policies to enhance financial security.

4.6 Regression Analysis

Regression analysis was conducted to examine the influence of fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies on revenue growth among SMEs. The study employed multiple linear regression to assess the strength and direction of relationships among the variables. The analysis also included the age of the business, business size, and industry sector as additional predictors in Model 2 to determine their moderating effect.

4.6.1 Regression Coefficients Summary

Table 0-10: Beta Coefficients of Fraud Risk Assessment on Revenue Growth with Control Variables

Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16.908	2.364		7.028	.041
Fraud risk assessment	4.826	.566	3.364	2.918	.000
Age of Business	2.853	.724	4.642	1.197	.002
Business Size	.958	.100	.483	1.001	.000
Industry Sector	-.087	.059	-.038	-.609	.001

Dependent Variable: Revenue Growth
Source: Researcher (2025)

The regression results in Table 4.10 indicated that fraud risk assessment had a strong and statistically significant positive effect on revenue growth ($B = 4.826$, $\beta = 3.364$, $p = 0.000$), suggesting that businesses which proactively assessed fraud risks were more likely to experience higher revenue growth. The control variables: age of business, business size, and industry sector, also showed statistically significant effects. Specifically, age of business ($B = 2.853$, $\beta = 4.642$, $p = 0.002$) and business size ($B = 0.958$, $\beta = 0.483$, $p = 0.000$) had positive relationships with revenue growth, implying that older and larger businesses were generally better positioned to grow revenue, possibly due to more robust systems, greater experience, and resource availability. In contrast, the industry sector had a small but significant negative effect ($B = -0.087$, $\beta = -0.038$, $p = 0.001$), suggesting that certain sectors may have faced contextual challenges that limited revenue performance.

Table 0-11: Beta Coefficients of Fraud Detection on Revenue Growth with Control Variables

Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.989	.891		3.064	.025
Fraud detection	1.704	.023	1.051	1.988	.000
Age of Business	1.440	.048	1.040	1.031	.000
Business Size	.076	0.49	1.043	1.001	.000
Industry Sector	.058	.064	.937	.809	.000

Dependent Variable: Revenue Growth

Source: Researcher (2025)

The regression results in Table 4.11 showed that fraud detection had a positive and statistically significant effect on revenue growth ($B = 1.704$, $\beta = 1.051$, $p = 0.000$), indicating that businesses with stronger fraud detection mechanisms were likely to experience increased revenue growth. For control variables: age of business ($B = 1.440$, $\beta = 1.040$, $p = 0.000$) and business size ($B = 0.076$, $\beta = 1.043$, $p = 0.000$) were positively associated with revenue growth, implying that more established and larger businesses had structural advantages that contributed to financial performance. Similarly, the industry sector showed a positive and significant effect ($B = 0.058$, $\beta = 0.937$, $p = 0.000$), suggesting that sectoral characteristics may have played a supportive role in enhancing revenue outcomes.

Table 0-12: Beta Coefficients of Fraud Deterrence on Revenue Growth with Control Variables

Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.640	.182		19.963	.000
Fraud Deterrence	-.004	.048	-.005	-.080	.936
Age of Business	.013	.031	.027	.422	.673
Business Size	.000	.021	.001	.019	.985
Industry Sector	-.010	.018	-.038	-.581	.562

Dependent Variable: Revenue Growth

Source: Researcher (2025)

The findings presented in Table 4.12 indicated that fraud deterrence had an inverse and insignificant relationship with revenue growth ($B = -0.004$, $\beta = -0.005$, $p = 0.936$), indicating that while fraud deterrent strategies may constrain business operations, there is no meaningful association between fraud deterrence measures and revenue growth; thus, the former does not influence the latter, especially in women-owned SMEs. This further implied that even though preventing fraud is critical to a business, deterrent measures do not guarantee improvements in revenue collection. Among the control variables, age of business ($B = 0.013$, $\beta = 0.027$, $p = 0.673$) and business size ($B = 0.000$, $\beta = 0.001$, $p = 0.985$) were positively and insignificantly associated with revenue growth, reinforcing the idea that maturity and scale do not necessarily lead to positive or improved financial outcomes. Conversely, the industry sector exerted a small but insignificant

negative effect ($B = -0.010$, $\beta = -0.038$, $p = 0.562$), pointing to the possibility that sector-specific factors do not often impede revenue performance in certain contexts.

Table 4.13 Beta Coefficients of Anti-Fraud Policies on Revenue Growth with Control Variables

Predictor	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	16.119	2.236		7.227	.000
Anti-Fraud Policies	4.239	.505	2.477	1.927	.000
Age of Business	2.050	.078	1.040	.911	.000
Business Size	1.066	0.69	1.043	1.001	.000
Industry Sector	.086	.044	.051	.909	.000

Dependent Variable: Revenue Growth

Source: Researcher (2025)

The output in Table 4.13 revealed that anti-fraud policies had a positive and statistically significant effect on revenue growth ($B = 4.239$, $\beta = 2.477$, $p = 0.000$), indicating that businesses with clearly established anti-fraud frameworks were more likely to experience enhanced financial performance. This underscored the value of formal policies in creating a culture of accountability and minimising fraud-related losses. Additionally, the control variables: age of business ($B = 2.050$, $\beta = 1.040$, $p = 0.000$) and business size ($B = 1.066$, $\beta = 1.043$, $p = 0.000$) were positively associated with revenue growth, suggesting that mature and larger enterprises typically benefit from established practices and resource capacity that support expansion. Industry sector also demonstrated a modest but significant positive effect ($B = 0.086$, $\beta = 0.051$, $p = 0.000$), implying that certain sectors may provide favourable conditions for revenue growth compared to others.

Table 0-13: Beta Coefficient Results for Multivariate Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	2.989	.361		11.287	.042
Fraud risk assessment	.082	.078	.075	2.198	.000
Fraud detection	.074	.043	.051	1.088	.000
Fraud deterrence	-.014	.011	-.062	-1.006	.000
Anti-Fraud Policies	.079	.072	.070	2.027	.000

a. Dependent Variable: Revenue Growth

Source: Researcher (2025)

The results in Table 4.14 presented the beta coefficients from the multivariate regression analysis, indicating the strength and direction of the relationship between fraud management practices and revenue growth among SMEs. The model showed that fraud risk assessment had a positive and statistically significant influence on revenue growth ($\beta = 0.075$, $p = .000$), suggesting that firms that actively assessed fraud risks were more likely to experience improved revenue performance. Fraud detection also showed a positive relationship with revenue growth ($\beta = 0.051$, $p = .000$), albeit with a smaller standardised coefficient, indicating a relatively modest contribution to revenue outcomes. Interestingly, fraud deterrence demonstrated a negative and statistically significant relationship with revenue growth ($\beta = -0.062$, $p = .000$), implying that overly punitive or reactive deterrence strategies may have unintentionally constrained growth, possibly by creating rigid or fear-based operational environments. Anti-fraud policies, on the other hand, had a positive and significant impact ($\beta = 0.070$, $p = .000$), reinforcing the importance of structured and proactive policy frameworks in promoting revenue stability and growth.

4.6.2 Regression Model Summary

Table 0-14: Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890 ^a	.792	.787	.23835
2	.910 ^b	.828	.813	.24962

a. Predictors: (Constant), Fraud risk assessment, Fraud detection, Fraud deterrence, Anti-Fraud Policies

b. Predictors: (Constant), Fraud risk assessment, Fraud detection, Fraud deterrence, Anti-Fraud Policies, Age of Business, Business Size, Industry Sector

Source: Researcher (2025)

The results indicated a high coefficient of determination (R^2), demonstrating that a significant portion of the variation in revenue growth was explained by the independent variables included in the regression model.

In Model 1, an R^2 value of 0.792 suggested that 79.2% of the variation in revenue growth was attributed to fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies. This finding implies that fraud risk management strategies play a critical role in shaping the financial performance of SMEs, ensuring that proactive measures to mitigate fraud contribute directly to revenue stability and growth. However, the remaining 20.8% of the variability in revenue growth

could be influenced by external market conditions, regulatory factors, competitive pressures, or other organisational dynamics that were not captured within this model.

In Model 2, the inclusion of Age of Business, Business Size, and Industry Sector led to a slight increase in R^2 to 0.828 (82.8%), meaning that these additional factors explained a further 3.6% of the variation in revenue growth. This minor improvement suggests that while business characteristics do have an impact on revenue growth, their influence is not as strong as the core fraud risk management practices. The slight increase in Adjusted R^2 from 0.787 in Model 1 to 0.813 in Model 2 further supports this, indicating that the additional variables enhanced the model's predictive power but were not the primary determinants of revenue growth. The small difference between R^2 and Adjusted R^2 in both models suggests that the predictors included in the regression equation provide a good fit without excessive redundancy or overfitting.

The standard error of the estimate remained relatively low, further validating the reliability of the regression model. In Model 1, the standard error was 0.23835, while in Model 2, it increased slightly to 0.24962. This minor increase suggests that while the additional predictors slightly enhanced explanatory power, they also introduced some degree of variability in the predicted values. However, the overall low standard error confirms that the model provides accurate and consistent predictions of revenue growth, reinforcing the significance of fraud risk management practices in driving SMEs' financial performance.

4.6.3 ANOVA Analysis

Table 0-15: ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.849	4	18.012	289.694	.000 ^b
	Residual	10.757	237	.077		
	Total	80.606	236			
2	Regression	73.213	7	10.316	165.564	.000 ^c
	Residual	10.592	234	.062		
	Total	83.805	236			

a. Dependent Variable: Revenue Growth

b. Predictors: (Constant), Fraud risk assessment, Fraud detection, Fraud deterrence, Anti-Fraud Policies

c. Predictors: (Constant), Fraud risk assessment, Fraud detection, Fraud deterrence, Anti-Fraud Policies, Age of Business, Business Size, Industry Sector

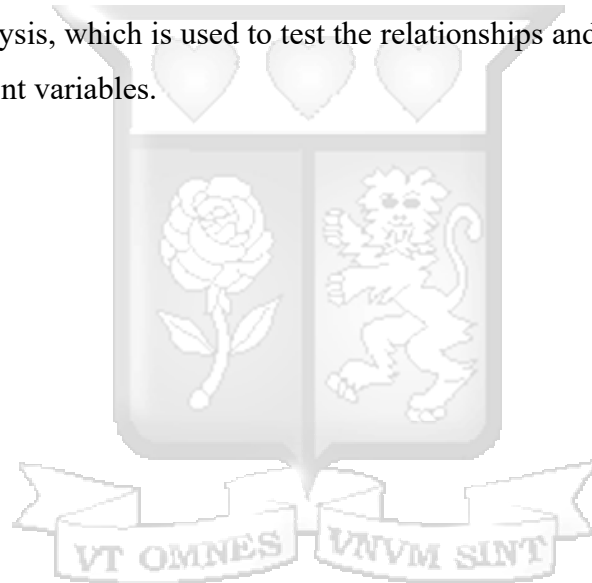
Source: Researcher (2025)

The ANOVA results confirmed that the regression models were statistically significant predictors of revenue growth. In Model 1, the F-statistic ($F = 289.694$, $p < 0.05$) indicated a strong relationship between fraud management practices and revenue growth. Similarly, Model 2, which

included additional variables, remained significant ($F = 165.564, p < 0.05$), suggesting that Age of Business, Business Size, and Industry Sector contributed to explaining revenue growth. The findings emphasise that fraud risk management strategies play a vital role in financial performance, and their effectiveness can be enhanced by considering business characteristics.

4.7 Chapter Summary

This chapter presents the research findings, providing a comprehensive analysis of the data collected for the study. It begins by detailing the background information on the respondents, offering key characteristics and demographic data that set the context for the analysis. The chapter further explores the descriptive statistics, which summarise the central tendencies and distribution of variables related to the respondents' experiences and perspectives. The chapter also includes the inferential statistical analysis, which is used to test the relationships and associations between the dependent and independent variables.



CHAPTER FIVE – DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section presents a summary of the findings, as well as a discussion of the findings based on each objective. The chapter also presents the study conclusion, recommendations, and suggests various areas for further research.

5.2 Summary

This study examined the effect of fraud risk management on the revenue growth of women-owned SMEs in Starehe Sub-County, focusing on four key components: fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies. The study also explored the influence of business characteristics, including the age of the business, business size, and industry sector, as control variables. A positive research philosophy with a descriptive correlational research design was adopted to investigate the relationships between these key variables. Data was collected from women-owned SMEs through structured questionnaires, and both descriptive and inferential statistical analyses, including correlation and multiple linear regression, were employed to assess the significance and strength of these relationships.

The correlation analysis demonstrated that all four fraud risk management components had a significant and positive relationship with revenue growth. Fraud risk assessment exhibited the strongest correlation, followed closely by anti-fraud policies, fraud detection, and fraud deterrence. The regression analysis supported these findings, showing that fraud risk assessment and anti-fraud policies had strong and statistically significant positive effects on revenue growth. Fraud detection also showed a positive effect, though with slightly lower coefficients. Notably, fraud deterrence had a negative and statistically significant effect, indicating that overly punitive or poorly communicated deterrence measures may hinder financial performance. The inclusion of control variables (age of business, size, and industry sector) further improved the model's explanatory power, though the influence of fraud risk management components remained dominant.

Overall, the study findings underscored the critical role of fraud risk management strategies in sustaining and improving the financial performance of women-owned SMEs. While fraud risk assessment and anti-fraud policies were effectively associated with positive revenue outcomes, challenges in fraud deterrence and uneven enforcement of detection mechanisms remain. The study concluded that women-owned SMEs should prioritise a balanced and well-integrated fraud

risk management framework, supported by training, technology, and policy enforcement, to mitigate financial risks and strengthen business resilience. These findings contribute valuable insights to ongoing discussions on SME growth and fraud resilience and provide a strong foundation for evidence-based policy and practice in fraud prevention.

5.3 Discussion of Findings

This section discusses the findings established by the study and compares them to previous literature.

5.3.1 Effect of Fraud Risk Assessment on Revenue Growth of SMEs

The study revealed that fraud risk assessment had a positive and significant effect on the revenue growth of women-owned SMEs in Starehe Sub-County. This finding suggested that businesses that regularly assess fraud risks are better positioned to safeguard their financial resources, minimise fraud-related losses, and sustain revenue growth. This aligns with the findings of Albrecht et al. (2020), who emphasised that proactive fraud risk assessments enhance financial stability by identifying vulnerabilities and mitigating potential fraud risks. Similarly, Karanja and Njoroge (2021) found that SMEs that implemented structured fraud risk assessment frameworks experienced fewer financial irregularities and improved business performance. The implementation of fraud risk assessment allows SMEs to create early warning mechanisms that alert management to potentially fraudulent activities before they escalate into significant financial losses.

The findings contrasted with Wanjiru and Kamau (2022), who noted that many SMEs in Kenya fail to conduct comprehensive fraud risk assessments due to limited financial resources and a lack of awareness. Their study indicated that while some businesses acknowledge the importance of fraud risk management, they often rely on reactive measures rather than proactive risk assessment strategies. The current study suggested that although some SMEs actively implement fraud risk assessments, challenges remain in fully integrating risk assessment frameworks across all business processes. Mutua (2019) emphasised that the effectiveness of fraud risk assessment depends on SMEs' access to skilled personnel and technological tools, highlighting the need for capacity-building initiatives. Without adequate knowledge and resources, many SMEs remain vulnerable to fraud despite their recognition of the risks involved.

Overall, the findings underscored the need for SMEs to invest in fraud risk assessment mechanisms, including regular audits, employee training, and the adoption of fraud detection

technologies, to enhance revenue growth. Implementing proactive fraud assessment strategies will enable SMEs to detect potential fraud risks early and put in place effective preventive measures to safeguard financial performance. By integrating fraud risk assessment as a core component of financial management, SMEs can strengthen their operational resilience and improve their long-term sustainability. Businesses that institutionalise fraud risk assessment processes can also enhance investor confidence, leading to increased funding opportunities and expansion prospects.

5.3.2 Effect of Fraud Detection on Revenue Growth of SMEs

The study findings showed that fraud detection had a significant relationship with revenue growth, but the regression analysis revealed mixed results, with some coefficients indicating only a moderate effect. This suggested that while fraud detection mechanisms were crucial in identifying and preventing fraudulent activities, their impact on revenue growth might have been influenced by factors such as system efficiency, employee vigilance, and technological adoption. These findings aligned with those of Singleton and Simmons (2021), who found that businesses that invested in advanced fraud detection systems, such as data analytics and artificial intelligence, were able to minimise financial losses and sustain revenue growth. Fraud detection mechanisms were particularly effective when integrated with real-time monitoring systems that promptly identified suspicious financial transactions (Kariuki & Mutiso, 2022). Furthermore, companies that adopted machine learning algorithms for fraud detection were able to predict fraudulent behaviour with greater accuracy, reducing financial risks.

Similarly, Mwangi (2020) highlighted that SMEs in Kenya often struggled with implementing effective fraud detection due to budgetary constraints and a lack of technical expertise. Their study emphasised that while some businesses had basic fraud detection measures, such as internal audits and whistleblower policies, these strategies were often reactive rather than proactive. The current study reinforced this by indicating that while fraud detection contributed to revenue growth, its effectiveness depended on how well SMEs integrated it within their financial management systems. Wambua and Otieno (2021) suggested that SMEs should adopt cloud-based fraud detection systems to enhance security and improve efficiency in tracking fraudulent activities. Additionally, integrating fraud detection mechanisms with enterprise resource planning (ERP) systems could improve financial oversight and facilitate real-time identification of fraudulent transactions. Fraud detection was most effective when it complemented a comprehensive risk management strategy that included both preventive and corrective measures.

These findings suggested that SMEs should have enhanced their fraud detection capacity by leveraging modern fraud detection tools, investing in employee fraud awareness programs, and establishing clear reporting frameworks for suspicious activities. Strengthening fraud detection mechanisms would have helped SMEs minimise financial losses and improve overall business resilience. Incorporating automated fraud detection systems could have further enhanced SMEs' ability to combat emerging fraud threats and ensure revenue stability in a competitive business environment. Businesses that prioritised fraud detection would have been better positioned to maintain financial integrity, improve investor confidence, and ensure long-term sustainability.

5.3.3 Effect of Fraud Deterrence on Revenue Growth of SMEs

The study found that fraud deterrence had a negative and insignificant effect on revenue growth. This result suggested that deterrence strategies such as strict penalties and rigid internal fraud controls are normal business operations intended to caution the business from fraudulent activities. It also implied that aggressive deterrence measures may have unintended consequences, especially when not balanced with adequate supportive ethical frameworks. The findings were consistent with Cressey and Moore (2022), who observed that excessive deterrence mechanisms can lead to fear-based work environments, reduced employee morale, and reluctance to report fraudulent activities. Similarly, Becker and Murphy (2021) emphasised that overly punitive deterrence policies may backfire by eroding trust and discouraging proactive engagement in the prevention of fraud. In this study, the negative coefficients indicated that when deterrence measures are perceived as oppressive or misaligned with the business culture, they may suppress innovation, collaboration, and employee-driven controls that are essential to revenue growth.

Conversely, literature has shown that well-structured and positively communicated deterrence strategies can still be effective. Omondi and Achieng (2021) found that SMEs which integrated deterrence policies within their operational culture through measures such as employee onboarding, regular ethics briefings, and financial oversight experienced fewer incidents of fraud. The current study supported this perspective by reinforcing the idea that deterrence measures are most effective when embedded within a culture of accountability and ethical leadership. Mugenda (2020) argued that coupling deterrence with strong corporate governance enhances employee awareness and fosters transparency. Additionally, Karanja et al. (2022) recommended combining enforcement with ongoing training, open-door fraud reporting channels, and clear policy

communication, which together help employees view deterrence as a protective rather than punitive framework.

These findings indicated that SMEs needed to reevaluate how fraud deterrence strategies were designed and implemented. Instead of relying solely on strict enforcement and punitive consequences, businesses are encouraged to promote ethical awareness and involve employees in decision-making around fraud prevention. A participatory, well-communicated approach to fraud deterrence, paired with consistent reinforcement of ethical behaviour and leadership transparency, could reduce resistance and foster a fraud-conscious culture. This balance would enable SMEs to prevent fraudulent activities effectively while supporting employee morale and enhancing financial performance.

5.3.4 Effect of Anti-Fraud Policies on Revenue Growth of SMEs

The study revealed that anti-fraud policies had a positive and significant impact on revenue growth, emphasising the importance of structured fraud prevention frameworks in SMEs. This finding aligned with the research of Albrecht et al. (2021), which found that organisations with well-defined anti-fraud policies experienced lower fraud-related losses and improved financial performance. Their study indicated that comprehensive policies, including clear reporting mechanisms, regular fraud audits, and whistleblower protections, played a vital role in mitigating fraud risks. Fraud prevention policies should also incorporate periodic reviews to ensure that they remain effective in addressing emerging fraud threats (Kimani, 2021). According to Karanja and Njoroge (2022), businesses that integrated anti-fraud policies into their corporate governance structures were more likely to sustain long-term financial stability. SMEs that adopted strict policy enforcement mechanisms were better positioned to mitigate fraud risks and strengthen revenue security.

However, the findings contrasted with Kimani (2020), who argued that while anti-fraud policies were essential, their implementation was often inconsistent in SMEs due to resource limitations and a lack of enforcement mechanisms. Their study noted that some businesses developed anti-fraud policies but failed to operate them effectively, leading to continued fraud risks. The current study suggested that while most SMEs recognised the importance of anti-fraud policies, challenges remained in ensuring their strict enforcement and alignment with daily business operations. Strengthening compliance monitoring mechanisms could have enhanced the effectiveness of anti-fraud policies in SMEs (Wambua & Otieno, 2021). Moreover, Mwangi and Mutua (2021)

emphasised that SMEs should tailor their anti-fraud policies to industry-specific fraud risks rather than adopting generic approaches that might not effectively address their unique operational challenges. Implementing digital fraud detection tools alongside anti-fraud policies could also have improved fraud management efficiency.

These findings indicated that SMEs should have strengthened their fraud prevention policies by ensuring strict compliance, providing regular fraud risk training, and integrating technology-driven fraud monitoring systems. By reinforcing anti-fraud policies, businesses could have established a strong fraud prevention culture, reduced financial risks and improved revenue growth. Developing clear accountability structures and ensuring that employees were well-informed about fraud prevention measures could have further enhanced policy effectiveness. Additionally, fostering collaboration with financial institutions and regulatory bodies to improve fraud prevention strategies would have contributed to more secure and resilient business operations.

5.4 Conclusion

The study concluded that fraud risk assessment had a significant and positive impact on the revenue growth of women-owned SMEs in Starehe Sub-County. Businesses that regularly conducted fraud risk assessments were better equipped to detect potentially fraudulent activities early, minimising financial losses and enhancing revenue sustainability. The findings suggested that structured fraud risk assessment mechanisms, such as internal audits and financial monitoring, played a crucial role in safeguarding business assets and ensuring operational efficiency. Besides, the findings underscored the role that support programmes and ethical training for employees can play in addressing internal opportunities for fraud. Equipping employees with skills and abilities to recognise a fraud scheme can significantly boost assessment, detection and deterrence. However, the study also highlighted that some SMEs lacked adequate fraud assessment frameworks, which exposed them to financial vulnerabilities. Therefore, SMEs needed to institutionalise fraud risk assessment strategies to strengthen their financial management systems and enhance revenue growth.

The study further concluded that fraud detection played an important role in influencing revenue growth, though its effectiveness depended on the technological tools, employee awareness, and reporting mechanisms in place. SMEs that invested in fraud detection systems, such as real-time transaction monitoring and automated fraud detection software, were able to minimise financial risks and improve operational efficiency. In this case, there is a need for women SME owners to

understand the complex interplay of factors that lead to fraud, to invest in an effective fraud detection system that can send real-time alerts of potentially fraudulent activities on the business's network. However, the study findings indicated that while fraud detection mechanisms contributed to revenue growth, many SMEs struggled with implementation due to budgetary constraints and technical expertise gaps. This suggests that enhancing access to affordable fraud detection technologies and providing employee training on fraud identification would be essential in improving financial security and revenue performance.

The study also concluded that fraud deterrence had a negative and statistically significant effect on revenue growth. While the intention behind deterrence strategies was to prevent fraudulent activities through strict penalties and disciplinary actions, the study findings indicated that overly rigid or punitive policies may have inadvertently hindered financial performance. Excessive enforcement without accompanying ethical support or an inclusive organisational culture could create fear, reduce employee morale, and discourage reporting of fraudulent behaviour. To ensure employees work in the best interest of the business, women SME owners should ensure the implementation of policies is flexible and adequately promote employee welfare. Support programmes during the policy implementation phase can also alleviate internal opportunities for fraud. Therefore, SMEs needed to reevaluate how deterrence strategies were structured and communicated. Adopting a more balanced approach that promoted transparency, encouraged ethical behaviour, and involved employees in fraud prevention efforts would have improved the effectiveness of fraud deterrence in supporting revenue growth.

Additionally, the study found that anti-fraud policies had a strong and positive effect on revenue growth, highlighting the importance of structured fraud prevention frameworks in SMEs. SMEs that enforced well-defined anti-fraud policies, including fraud risk audits, whistleblower protections, and compliance monitoring, reported reduced incidences of fraud and improved financial performance. Opportunities for fraud can therefore be thwarted through strong regulations that foster responsibility, reinforce internal controls and set clear job expectations for employees. Effective internal controls, sufficient close supervision, and adequate separation of duties are fundamental measures women SME owners can consider to prevent opportunities for fraud within organisations. However, the study established that some SMEs could not enforce anti-fraud policies effectively, limiting their ability to combat fraudulent activities comprehensively. Therefore, SMEs needed to prioritise strict compliance with fraud prevention

policies, integrate digital fraud monitoring solutions, and establish standardised anti-fraud frameworks to strengthen financial security and ensure sustainable revenue growth.

Overall, the study findings confirmed that fraud risk management practices, including risk assessment, fraud detection, fraud deterrence, and anti-fraud policies, played a critical role in shaping the revenue growth of women-owned SMEs in Starehe Sub-County. Fraud risk assessment, fraud detection, and anti-fraud policies showed strong and positive effects, while fraud deterrence demonstrated a negative impact, highlighting the need for caution in its implementation. The study emphasised the importance of adopting a comprehensive fraud risk management framework that balanced proactive fraud assessment, investment in detection technologies, structured yet employee-friendly deterrence measures, and strict enforcement of anti-fraud policies. Strengthening these components holistically would not only improve financial security but also enhance the overall sustainability, resilience, and competitive edge of SMEs in the post-COVID-19 era.

5.5 Recommendations

Based on the conclusion that fraud risk assessment had a significant impact on revenue growth, the study recommended that SMEs should have institutionalised regular fraud risk assessments to identify potential threats and safeguard financial resources. Businesses should have developed standardised fraud assessment frameworks that incorporate internal audits, financial monitoring, and compliance checks to ensure proactive fraud risk management. Additionally, SMEs should have leveraged technological advancements, such as automated fraud risk assessment tools, to enhance accuracy and efficiency in detecting financial irregularities. Providing fraud risk assessment training for business owners and employees would have further strengthened SMEs' ability to detect and mitigate fraudulent activities.

Given the finding that fraud detection played a crucial role in minimising financial losses and improving revenue growth, the study recommended that SMEs should invest in advanced fraud detection technologies to enhance their fraud prevention capabilities. Businesses should have adopted real-time fraud monitoring systems, data analytics tools, and machine learning algorithms to improve fraud detection accuracy. Furthermore, SMEs should have implemented structured fraud reporting mechanisms that encouraged employees to report suspicious activities without fear of retaliation. Enhancing employee awareness and training on fraud detection, the best practices would have strengthened SMEs' capacity to identify and address fraud risks effectively.

The study also recommended that SMEs should adopt a balanced approach to fraud deterrence to avoid unintended negative consequences on employee morale and organisational culture. Businesses should have developed well-structured fraud deterrence policies that emphasised ethical leadership, transparent governance, and employee inclusion in fraud prevention efforts. Establishing clear and enforceable fraud deterrence measures, such as disciplinary actions and financial penalties, should be accompanied by ethical training programs to foster a culture of accountability. Additionally, SMEs should have promoted open communication about fraud deterrence strategies to ensure that employees understood their role in preventing fraudulent activities while maintaining a supportive workplace environment.

Finally, the study recommended that SMEs should strengthen the enforcement of anti-fraud policies to enhance revenue protection and business sustainability. Businesses should have integrated anti-fraud policies into their corporate governance frameworks to ensure consistent enforcement and compliance. Regular reviews and updates of anti-fraud policies should have been conducted to address emerging fraud threats and align with evolving business environments. SMEs should have also collaborated with financial institutions and regulatory bodies to enhance fraud prevention strategies through the industry's best practices and compliance standards. By reinforcing anti-fraud policies, businesses would have improved financial security, mitigated fraud risks, and sustained long-term revenue growth.

5.6 Limitations of the Study

Multiple limitations emerged that may have shaped the outcomes and conclusions of the study. One notable limitation was time constraints, as there was a short timeframe for data collection. Nonetheless, the researcher tried to ensure that the data were analysed comprehensively to guarantee reliable and valid findings. Another limitation of the study was a lack of resources. Initially, questionnaires were to be administered offline, but due to resource and time constraints, they were distributed online. As such, self-selection bias, which is common in online questionnaires, was unavoidable.

5.7 Areas for Further Research

While this study examined the effects of fraud risk assessment, fraud detection, fraud deterrence, and anti-fraud policies on revenue growth in women-owned SMEs, future research could have explored the role of regulatory frameworks and government policies in shaping fraud prevention strategies among SMEs. Additionally, comparative studies could have been conducted across

different regions or industries to assess variations in fraud risk management practices and their effectiveness in enhancing revenue growth. Further research could have also examined the long-term impact of digital fraud detection tools and artificial intelligence-driven fraud prevention systems on the financial sustainability of SMEs.

5.8 Chapter Summary

This chapter presented a summary of the main findings of the study, a discussion of these findings, conclusions and recommendations based on the findings. It also explored the limitations of the study, acknowledging its strengths and weaknesses. Finally, the chapter presented the areas of further research that future researchers should consider to substantiate gaps in knowledge that the current study has not adequately addressed.



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APPENDICES

Appendix I: Introductory Letter

Ole Sangale Rd, Madaraka Estate,
P.O Box 59857 00200, Nairobi, Kenya.
Cell: +254 703 414/6/7, Twitter: @SBSKenya
Email: info@sbs.ac.ke or visit www.sbs.strathmore.edu



5th July 2024

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – WARUI NJAMBI CAROLYNE

This is to introduce Warui Njambi Carolyne who is a Master of Commerce (MCOM) Student at Strathmore University Business School, admission number MCOM/87853/19. As part of our MCOM Programme, Carolyne is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MCOM course. To this effect, Carolyne would like to request appropriate data from your organization.

Carolyne is undertaking a research paper on **“Effects of Fraud Risk Management on Revenue Growth of Small and Medium Sized Enterprises owned by Women in Starehe Sub-County During the Covid-19 Pandemic.”** The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MCOM Programme seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,



Njoki Kiagiri
Manager – Graduate Programmes
Strathmore University Business School.

Strathmore Business School is a Proud member of;

Association of African
Business Schools



Appendix II: Questionnaire

QUESTIONNAIRE

This is a questionnaire designed for collection of primary data for academic research study in master's program on the Effects of Fraud Risk Management on Revenue Growth of Small and Medium Sized Enterprises Owned by Women in Starehe Sub-County during the Covid-19 Pandemic. The collected information will exclusively be for academic motive only with assurances that it will be handled with utmost confidentiality for all personal details. We kindly request your participation through answering a set of questions itemized in various sections.

Section A: Demographic details

i. What is your age in the age brackets below?

18 – 35 36 – 45 46 – 55 56 – 65 66 and above

ii. What is your highest educational level?

Educational Level

Secondary School Education

Certificate/ Diploma

Bachelor

Masters

PhD

Please tick the appropriate category

iii. For how long has your business been operation?

Duration in years

Less than 1 year

1 – 2 years

3 – 5 years

6 – 10 years

More than 10 years

Please tick the appropriate category

iv. What is your business Capital turnover in Kenya Shillings?

Business Size

500,000-1,400,000

1,400,000-2,300,000

2,300,000-3,200,000

3,200,000-4,100,000

4,100,000-5,000,000

Please tick the appropriate category

v. Which sector does your business belong to?

Industry Sector

Manufacturing
 Wholesale and retail trade
 Accommodation and Food
 Financial and Insurance
 Administration, Support and other services

Please tick the appropriate category

Section B: Fraud Risk Assessment

Please indicate your level of agreement/disagreement regarding fraud risk management and its impact on revenue growth. Indicate your answers by using a tick (√) in the spaces provided in the table below: 1 = SD = Strongly Disagree, 2 = D = Disagree, 3 = N = Neutral, 4 = A = Agree, 5 = SA = Strongly Agree.

No.	Statements	SD 1	D 2	N 3	A 4	SA 5
1	We regularly assess fraud risk within our organization to safeguard revenue growth.	W	e			
2	Our business has implemented systematic fraud risk assessment procedures during the pandemic.					
3	Fraud risk assessment has helped us identify potential fraud areas affecting revenue growth.					
4	Regular fraud risk assessments have minimized fraud-related losses in our business.					
5	Our organization prioritizes fraud risk assessment to ensure financial stability.					
6	We believe that thorough fraud risk assessments contribute to revenue growth.					

Section C: Fraud Detection

Please indicate your level of agreement/disagreement regarding fraud detection and its impact on revenue growth. Indicate your answers by using a tick (√) in the spaces provided in the table below: 1 = SD = Strongly Disagree, 2 = D = Disagree, 3 = N = Neutral, 4 = A = Agree, 5 = SA = Strongly Agree.

No.	Statements	SD	D	N	A	SA
		1	2	3	4	5
1	We have effective fraud detection mechanisms in place to protect revenue growth.					
2	Our fraud detection systems are regularly updated to address emerging fraud threats.					
3	Effective fraud detection has significantly reduced financial losses during the pandemic.					
4	We invest in advanced technology for timely fraud detection.					
5	Our employees are trained to detect and report fraudulent activities.					
6	Continuous improvement in fraud detection has positively impacted our revenue growth.					

Section D: Fraud Deterrence

Please indicate your level of agreement/disagreement regarding fraud deterrence and its impact on revenue growth. Indicate your answers by using a tick (✓) in the spaces provided in the table below: 1 = SD = Strongly Disagree, 2 = D = Disagree, 3 = N = Neutral, 4 = A = Agree, 5 = SA = Strongly Agree.

No.	Statements	SD	D	N	A	SA
		1	2	3	4	5
1	We have strong policies in place to deter fraud and protect revenue growth.					
2	Fraud deterrence measures are regularly communicated to all employees.					
3	Our deterrence strategies effectively prevent fraudulent activities.					
4	We have established severe consequences for fraudulent actions.					
5	Fraud deterrence practices have contributed to maintaining our revenue levels.					
6	Consistent fraud deterrence has improved our business's financial performance.					

Section E: Anti-Fraud Policies

Please indicate your level of agreement/disagreement regarding anti-fraud policies plan in relation to revenue growth. Please indicate the answers of your choice by use of a tick (√) in the spaces provided in the table below: 1=SD=Strongly Disagree, 2=D=Disagree, 3=N=Neutral, 4=A=Agree, and 5=SA=Strongly Agree.

No.	Statements	SD	D	N	A	SA
		1	2	3	4	5
1	We have comprehensive anti-fraud policies that support revenue growth.					
2	Our anti-fraud policies are strictly enforced within the organization.					
3	Employees are well-informed about our anti-fraud policies and procedures.					
4	Regular reviews of anti-fraud policies enhance their effectiveness.					
5	Anti-fraud policies have reduced the incidence of fraud in our business.					
6	Implementing strong anti-fraud policies has positively impacted our revenue growth.					

Section F: Revenue Growth

- Kindly indicate the change in the following indicators of Revenue Growth in your business from the year 2022 to 2024. If an indicator experienced a growth of, say, 20% in a particular year, indicate 120%. If it declined with a certain percentage, for instance, 30% indicate 70%.

a) Monthly Revenue Growth

	2023	2024
Change (%)		

b) Quarter-over-Quarter Revenue Growth

	2023	2024
Change (%)		

c) Year-over-Year Revenue Growth

	2023	2024
Change (%)		

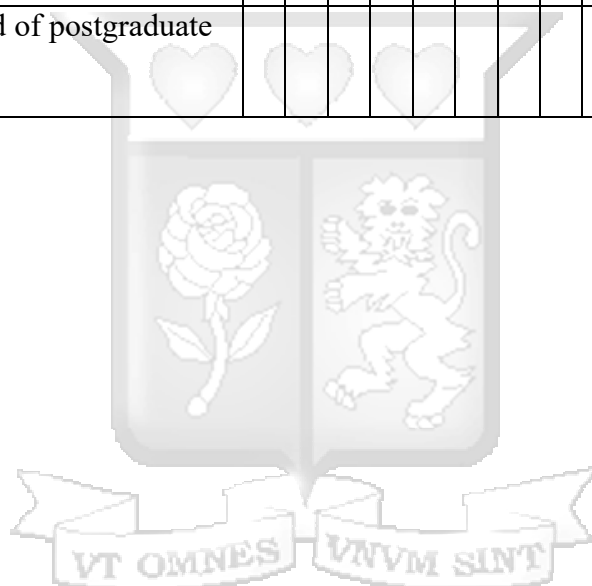
2. Please indicate your level of agreement/disagreement regarding revenue growth. Please indicate the answers of your choice by use of a tick (√) in the spaces provided in the table below: 1=SD=Strongly Disagree, 2=D=Disagree, 3=N=Neutral, 4=A=Agree, and 5=SA=Strongly Agree.

No.	Statements	SD 1	D 2	N 3	A 4	SA 5
1	Our business has experienced revenue growth during the pandemic.					
2	Implementing fraud risk management practices has contributed to our revenue growth.					
3	Our revenue growth is a result of effective fraud detection and deterrence measures.					
4	Strong anti-fraud policies have positively impacted our revenue growth.					
5	Regular fraud risk assessments have led to significant revenue growth.					
6	Fraud risk management has had a positive impact on our revenue growth.					

Appendix III: Work Plan

Activity

	Month 1				Month 2				Month 3				Month 4			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Topic selection	■															
Incorporate supervisors' reviews				■	■	■	■									
Presentation of proposal							■	■								
Pilot testing											■					
Data collection												■	■	■		
Data analysis													■	■		
Incorporate of comments															■	
“Submit project to board of postgraduate studies”																■



Appendix IV: Budget

Item/Activity	Estimated Cost (Kshs)
Stationery	10,000
Data Collection	100,000
Data analysis	50,000
Publication	40,000
Binding	20,000
Miscellaneous	30,000
Total Cost	250,000



Appendix V: Ethics Approval Letter



5th February 2025

Mrs Warui Carolyne,
carolyne.njambi@strathmore.edu

Dear Mrs Warui,

RE: Effect of Fraud Risk Management on Revenue Growth in Women-Owned Small and Medium Sized Enterprises in Starehe Post Covid-19

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2557/25**. The approval period is from **5th February 2025 to 4th February 2026**.

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-ISERC.
- 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-ISERC within 72 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-ISERC within 72 hours.
- v. Clearance for the 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 the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before 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,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Appendix VI: NACOSTI Permit

National Commission for Science, Technology and Innovation
REPUBLIC OF KENYA
Ref No: 776080
Date of Issue: 27/March/2025
RESEARCH LICENSE

This is to Certify that Ms.. Carolyne Njambi Warui of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: **EFFECT OF FRAUD RISK MANAGEMENT ON REVENUE GROWTH IN WOMEN-OWNED SMALL AND MEDIUM SIZED ENTERPRISES IN STAREHE POST COVID-19 for the period ending : 27/March/2026.**
License No: NACOSTI/P/25/417312
Applicant Identification Number: 776080
Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.
See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to.
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
 - i. Endanger national security
 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. Neither the license nor any rights thereunder are transferable.
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke