RISK MANAGEMENT STRATEGIES AND COMPETITIVENES OF SMALL AND MEDIUM ENTERPRISES IN KENYA

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Risk Management Strategies and Competitiveness of Small and Medium Enterprises in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

This work is dedicated to my dear family, the entire Mumassabba family especially my beloved mum Grace, dad Mathias and daughter Jannelle for their continued support throughout my academic journey.

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ACRONYMS AND ABBREVIATIONS

CMS	Constant Market Share
ETFs	Exchange Traded Funds
GDP	Gross Domestic Product
IT	Information Technology
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KNBS	Kenya National Bureau of Statistics
MBV	Market Based View
MPT	Modern Portfolio Theory
MSME	Micro, Small and Medium Establishments
TRC	Theory of Regulatory Compliance
RBV	Resource Based View
RM	Risk Management
SMEs	Small and Medium Enterprises
SPSS	Statistical Package For Social Sciences

DEFINITION OF OPERATIONAL TERMS

Competitiveness	SME's ability to effectively compete in the marketplace and achieve their goals, such as increased sales, profits, and market share. SME competitiveness is influenced by a number of factors including access to finance, technology, skilled labor, and market access (Chen C. , Factors Affecting the Competitiveness of Small and Medium Enterprises Evidence from Taiwan, 2015).
External Environment	A variety of factors, outside the firm whose existence, influence its behavior and can impact its competitiveness. These can include macroeconomic conditions, technological advancements, industry trends, government policies and competition from other firms (Ozkan & Kara, 2017).
Firm	A business entity made up of people, be they natural, legal, or a mixture of both that sells goods and services to make a profit (Reuer, 2018).
Risk	The potential for unexpected events or conditions that could negatively impact the competitiveness and overall performance of SMEs (Wang, Shi, & Zhu, 2015)
Risk Avoidance	Taking steps to remove or minimize the potential impact of negative events or outcomes or to end a certain exposure to risk (Lee K. , 2017).
Risk Mitigation	Risk management approach that seeks to minimize the potential impact of negative events or outcomes. Action plans to lessen or curtail the adverse impacts of possible threats that may impair firm's performance (Chen P. , 2018)
Risk Management	Process of identifying, assessing and prioritizing risks and implementing strategies to minimize their impact on an organization. The goal is to minimize the negative consequences of risks such as financial losses, operational disruptions, or reputational harm (Brouwer, 2017)

Risk Management Strategies	Identification of potential threats in advance, analyses and taking precautionary steps to reduce/curb the risk (Abeyrathna & Kalainathan, 2016).
Risk Retention	Absorption of any potential loss rather than transfer to an insurer or other party (Strupczewskia, Thlonb, & Fijorek, 2016)
Risk Transfer	Is a risk management strategy that involves transferring the responsibility for a specific risk from one party to another that is better equipped to manage or absorb the risk. (Silveria, 2017).
SMEs	Business firms who employ between 1 and 99 employees (National Council for Law Reporting, 2012) . This study considers SMEs categorized by permit fees between Ksh 5,000 and Ksh 200,000 as of December 2018 and employing between 1 to 99 employees.

ABSTRACT

Risk management strategies are essential for organizational competitiveness, yet many SMEs in Kenya lack these crucial elements, which hampers their growth. Despite the acknowledged importance of effective risk management, there is a notable scarcity of research on this topic within the Kenyan context. This study aims to address this gap by examining the influence of risk management strategies on the competitiveness of SMEs in Kenya, specifically risk avoidance, risk transfer, risk retention, and risk mitigation strategies. Additionally, the study explores the moderating effect of firm size on these relationships. Utilizing a pragmatic research philosophy, the study employed a mixed-methods design with a cross-sectional approach. The target population comprised 16,164 SMEs registered with the City of Kisumu. A stratified sampling technique was used to select a representative sample, and data were collected through questionnaires. The collected quantitative data were analyzed using both descriptive and inferential statistics, including multiple regression analysis. The study's model examined the following equations: Competitiveness = $\alpha + \beta 1$(Risk Avoidance) + ϵ; Competitiveness = $\alpha + \beta 2$(Risk Transfer) + ϵ; Competitiveness = $\alpha + \beta 3$(Risk Retention) + ϵ; and Competitiveness = $\alpha + \beta 4$(Risk Mitigation) + ϵ. The combined effect of all risk management strategies was analyzed using the model: Competitiveness = $\alpha + \beta 1$(Risk Avoidance) + $\beta 2$(Risk Transfer) + $\beta 3$(Risk Retention) + $\beta 4$(Risk Mitigation) + ϵ. The results revealed a significant positive relationship between the adoption of risk management strategies and the competitiveness of SMEs. Specifically, effective risk management was found to enhance SME performance, with industry dynamics and regulatory environments playing influential roles. The study also integrated various theoretical perspectives, including the Resource-Based View, Markowitz Portfolio Theory, Porter's Five Forces Framework, and Opportunity Cost Theory, offering practical insights for SMEs aiming to improve their resilience and market positioning. The findings showed that risk avoidance, transfer, retention, and mitigation strategies collectively increased SME competitiveness, with risk mitigation, particularly involving management decision-making, demonstrating a strong impact. The multiple regression model indicated that the joint effect of these strategies exceeded their individual contributions. Consequently, the study concludes that SME owners and managers should embrace comprehensive risk management practices to enhance market competitiveness. Recommendations include investing in research and development, continuously reviewing and improving risk management strategies, and applying all four strategies in concert. Additionally, it is advised that the government support SMEs by reducing tariffs, levies, and licenses, improving internet infrastructure, and providing capacity-building programs to facilitate effective risk management adoption. Future research should consider longitudinal studies to capture the evolving nature of risk management strategies and their sustained impact on SME competitiveness in dynamic business environments.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, risk management is increasingly pivotal in organizational operations. This evolution in risk management practices is evident across various sectors, with a notable emphasis on the business sector where risk is inherent in every decision and organizational competitiveness into the foreseeable future (KPMG Limited, 2017). Organizations, irrespective of their size, strive to address uncertainty and manage risks effectively (Crouhy, Galai, & Robert, 2013). Effective risk management enables businesses to make confident future decisions, essential for both small and medium-sized enterprises (SMEs) and larger firms facing similar risks (Canada Business Networks, 2020). Globally, Small, and medium enterprises (SMEs) play a crucial role in contributing to the gross domestic product (GDP) worldwide. In Japan and China, SMEs account for 60% of GDP. In the United States, this contribution rises to 65%. In the United Arab Emirates, SMEs generate 52% of GDP. Furthermore, in countries with lower income per capita, SMEs have a higher impact on employment, accounting for approximately 78% of jobs, compared to 59% in countries with higher income levels (Kawira, Mukulu, & Odhiambo, 2019).

High failure rates of SMEs have been reported across African countries. In South Africa, the failure rate of SMEs is estimated between 70% and 80% (Fatoki, 2014). In Uganda, about 33% of startups do not survive beyond one year, and in Chad, the failure rate is 65% (Muiruri, 2017). Therefore, there is need for African businesses, aiming for global market integration to adopt robust risk management strategies to ensure continuity and competitiveness. Effective risk management not only mitigates potential transitional costs but also enhances business value in a dynamic market environment (Haanaes, 2016). A study conducted in South Africa to measure risks of financial performance to SMEs shows that the need for risk management provides a significant role to develop and maintain the business (Chiliya, Rungani, Chiliya, & Chikandiwa, 2015). Thus, understanding and strategically addressing the specific risks an organization faces is crucial for maintaining competitiveness (Ofunya, 2014).

Regionally, African firms have grown significantly in scale, scope, and sophistication (White & Dongen, 2017). However, these local SMEs face challenges from Western multinationals, affecting their global competitiveness (Adeleye & Boso, 2016). For instance, in Kenya's Kisumu County, SMEs with international aspirations must improve performance to remain competitive, necessitating effective risk management strategies (Amankwah-Amoah, 2018).

Kenya's policies and practices in risk management are relatively nascent. Slow policy implementation and inadequate recognition of key sectors hinder improved risk management (Okoth, 2018). This shortcoming is evident in the management of natural calamities like floods, which significantly impact SMEs. A proactive, risk-based approach involving early identification and mitigation of risks is essential for innovative SMEs to navigate business-related challenges effectively (FATF, 2019).

The ability of SMEs to discern and manage business risks is critical to Kenya's long-term economic goals, such as Vision 2030. Strengthening SMEs involves understanding the link between risk management strategies and firm competitiveness (Njeru, 2019). SMEs contribute significantly to the economy by providing goods and services, fostering employment, and promoting technological advancements (Kenya National Bureau of Statistics , 2016). In Kenya 90% of all enterprises are SMEs providing employment to over 60% of the total employed population, SMEs in Kenya employed some 3.2 million people in 2003 and accounted for 18 per cent of national GDP (Thomas, 2014).

Despite their economic importance, many SMEs face challenges that hinder growth and performance. Approximately 70% of SMEs fail within their first three years due to unfavorable conditions (World Bank, 2015). To thrive, SMEs must continuously seek new opportunities and enhance their competitive advantages (Njau & Karugu, 2014).

In Kenya, a 2016 survey reported 1.6 million MSMEs, with the majority being micro enterprises (Kenya National Bureau of Statistics , 2016). Kisumu County alone had 40,200 licensed SMEs, predominantly micro enterprises (84.6%), followed by small (13.2%) and medium enterprises (2.2%). These SMEs are primarily engaged in

manufacturing, trade, accommodation, food services, and agro-based activities, impacting a broad segment of the population (Ong'olo & Samson, 2013). SMEs are defined variably worldwide, often by the number of employees, legal formality, or annual turnover (Ong'olo & Samson, 2013).

1.1.1 Global Trends on Competitiveness and Risk Management Strategies

Globally, creative disruptions are shaking up businesses, severely impacting those that fail to enhance their competitiveness (KPMG Limited, 2017). Contemporary trends in competitiveness and risk management are influenced by technological advancements, economic conditions, and evolving business practices. Competitiveness now increasingly depends on adoption of innovative strategies, sustainability, and digitalization. Firms invest heavily in research and development, sustainability initiatives, and digital technologies to maintain a competitive edge in a rapidly changing marketplace (Chen , 2018).

Risk management is crucial for identifying significant risks that could jeopardize business success and economic contributions. SMEs, often constrained by limited financial and non-financial resources, may not adequately apply risk management Strategies making them less responsive to business risks and leading to high failure rates (Marcelino, Pérez, Echeverría, & Villanueva, 2014). Thus, risk management strategies are a critical tool for the growth and survival of SMEs. Recent years have seen an increased emphasis on proactive risk management due to global business volatility and uncertainty. Firms are employing various techniques such as risk mapping, scenario planning, and contingency planning to understand and prepare for potential risks, thereby minimizing their impact. Additionally, there is a trend towards risk transfer and outsourcing certain risk management functions to enhance efficiency and effectiveness (Lairoche, 2017).

Understanding organizational risks involves quantitative or qualitative analysis to make decisions about major threats to organizational objectives. This requires assessing the likelihood and impact of each risk (Gephart, Miller, & Helgesson, 2018). In SMEs, risk management strategies focus on recognizing future uncertainties, evaluating risks, and formulating plans to mitigate or eliminate their impact

(Gwangwava, Faitira, Gutu, Chinoda, & Rangarirai, 2014). Implementing an effective risk management strategy involves comparing current approaches with best practices and aiming for continuous improvement. An organization's governing body should decide the desired maturity level of its risk management processes (CGIAR Internal Audit Unit, 2017).

This study was guided by competitiveness as the dependent variable, firm size as a moderating variable. The risk management strategies examined include risk avoidance, risk transfer, risk retention, and risk mitigation, and their impact on the competitiveness of SMEs in Kisumu County, Kenya.

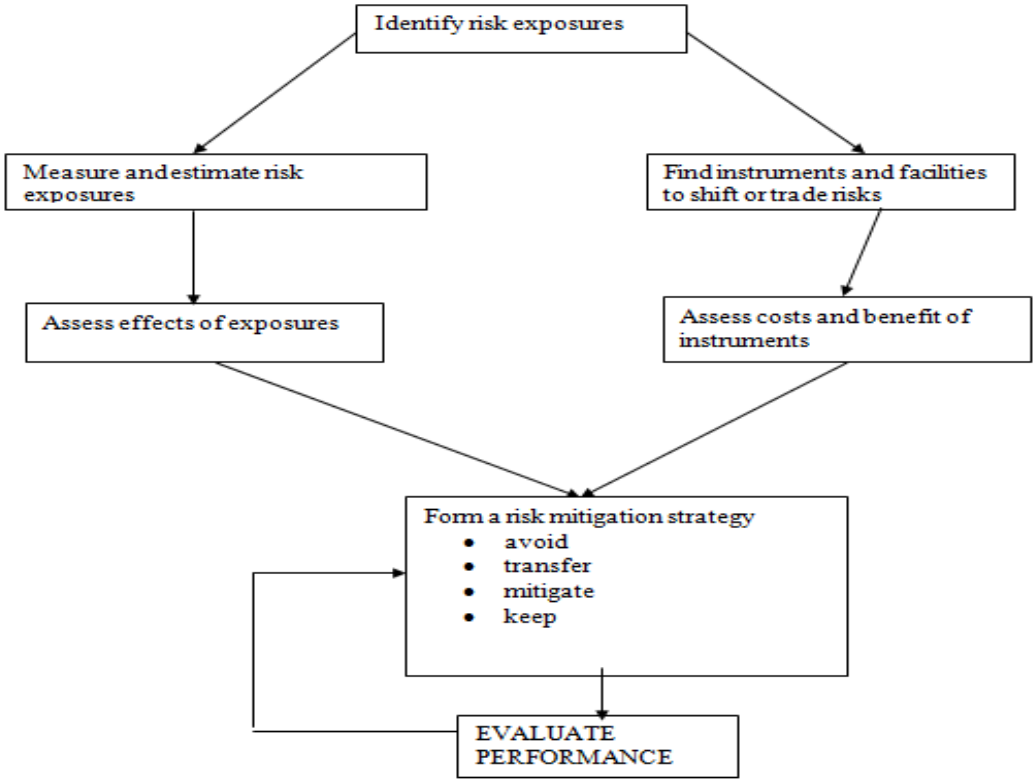

Figure 1.1: Risk Management Process

Source: (Berggren & Magnusson, 2015)

1.1.2 Concept of Competitiveness

Competitiveness refers to an organization's ability to achieve its mission more successfully than its competitors (Luisa, 2018). This capability is influenced by specific organizational and contextual factors, which means there is no universally applicable system for all organizations under all conditions (Wadongo & Abdel-Kader, 2014). The environment in which a business operates significantly affects its performance, with factors such as regulatory frameworks playing a crucial role (Vedamani, 2018).

Firm competitiveness can be explained using several theoretical constructs. Unlike Porter's external approach, which focuses on industry forces, internal approaches like the Resource-Based View (RBV), Dynamic Capabilities Theory, and Knowledge-Based Theory focus on the internal conditions of the firm. These theories emphasize the importance of a firm's resources, capabilities, and knowledge in achieving and sustaining competitiveness.

At the firm level, competitiveness is defined by competencies in physical and human resources, networking, innovation, and administrative processes that enable a firm to compete effectively and serve customers with valued goods and services (Basil, 2016). For SMEs in developing countries, globalization presents new opportunities but also pressures from unpredictable competitive moves by local large firms and foreign competitors. Internal risks such as loss of human capital, financial risks, and operational risks pose major threats to the competitiveness and survival of SMEs.

Therefore, enhancing SMEs' competencies in managing risks is crucial. Effective risk management strategies—such as risk avoidance, risk transfer, risk retention, and risk mitigation—can help SMEs navigate uncertainties and leverage hidden opportunities to gain market share, improve revenues, and increase profit margins. This study aims to investigate how these risk management strategies influence the competitiveness of SMEs in Kisumu County, with firm size serving as a moderating variable.

1.1.3 Overview of Small and Medium Enterprises Competitiveness in Kenya

SMEs in Kenya face significant challenges in competitiveness due to inadequacies in risk management. These firms often lack appropriate responses to risks, affecting small firms more acutely than larger ones (Sefer, Mesut, & Orhan, 2014). SMEs suffer from dis-economies of scale and are constrained in growth and business activities due to low resources. They are prone to low capitalization and cash flow problems, have limited marketing and buying power, and are typically price takers in the market. This limited capacity makes them more vulnerable to economic risks (Amankwah-Amoah, 2018). In Kenya, 70.8% of SMEs fail within the first three years of establishment (Kenya National Bureau of Statistics , 2016). This high failure rate is partly due to the lack of effective risk management, as SMEs have a smaller set of financial and non-financial resources.

The competitiveness, growth, and sustainability of SMEs are critical as they influence the emergence of large firms and the broadening of national economies. However, globally, empirical evidence shows that smaller firms struggle to overcome the risks associated with new business environments. SMEs' competitiveness is further hindered by adoption of inadequate risk management strategies, as small firms lack appropriate responses to risk factors compared to larger firms (Sefer, Mesut, & Orhan, 2014). The attitudes of SMEs towards risks and their risk assessments differ significantly from those of large enterprises. Risk management strategies in small firms are often influenced by the beliefs and attitudes of the owners or managers. SMEs typically do not use specialized techniques to optimize single risks but make decisions based on the overall business entity rather than managing specific risks. Despite performing some risk identification and evaluation, small business owners may ignore risk management strategies that could enhance their firm's competitiveness in the business environment.

1.1.4 Study Target Group

The study focused on small and medium enterprises (SMEs) in Kisumu City, Kenya. Kisumu County, one of Kenya's 47 counties, was selected for the study. Notably, Kisumu is the head of the Lake Region Economic Hub, one of Kenya's six economic

hubs, encompassing 14 counties. Additionally, there is a dearth of research and empirical studies focusing on risk management within the Kenyan SME sector, particularly in regions such as Kisumu County, which is poised for economic development. As the third largest and one of the fastest growing cities in Kenya, Kisumu accounted for 2.9% of the national GDP in 2017 (The Kenya Institute for Public Policy Research and Analysis (KIPPRA), 2021).

Kisumu City is located 0°6' South of the Equator and 34°45' East, standing 1,146 meters above sea level on the eastern shore of Lake Victoria, the continent's largest freshwater body, covering 68,800 square kilometers. The city spans an area of 417 square kilometers, with about 31% underwater. Since its inception as a railway terminus and internal port in 1901, Kisumu has evolved into a major communication and trading hub for the Great Lakes region, including Tanzania, Uganda, Rwanda, and Burundi.

Kisumu City, County's borders align with those of the original Kisumu District, a former administrative district in Western Kenya's Nyanza Province, with Kisumu City as its headquarters. The county is located between longitudes 33°20' East and 35°20' East, and latitudes 0°20' South and 0°50' South. It comprises 567 square kilometers of water and a total land area of 2,085.9 square kilometers, with a population of 968,909 as per the 2009 National Census.

Kisumu's strategic location and trading activities have driven steady population growth and urban expansion. Demographic projections for Africa anticipate increased population growth, density, and spatial expansion for Kisumu City by 2030. Proper urban planning is thus critical to address the anticipated population influx and the associated demand for services. Strategic planning must include fostering competitive SMEs to meet the dynamic needs of the growing population in terms of demand and supply of various services, thereby further enhancing the GDP contribution of SMEs to Kenya's national economy (The city of Kisumu, 2015).

1.2 Statement of the Problem

Globally, small and medium enterprises (SMEs) are pivotal in contributing to GDP. In Japan and China, SMEs account for 60% of GDP, whereas in the United States, their contribution rises to 65%. In the United Arab Emirates, SMEs contribute 52% to GDP. Furthermore, in lower-income countries, SMEs play a critical role in employment, providing about 78% of jobs, compared to 59% in higher-income nations (Kawira, Mukulu, & Odhiambo, 2019). In Kenya, SMEs were responsible for 80% of new job creation in 2014 (Kenya Agribusiness and Agro-Industry Alliance, 2016).

Despite their economic significance, SMEs often face substantial challenges that impede their growth. Approximately 70% of SMEs fail within their first three years due to adverse conditions (World Bank, 2015). Their competitiveness depends on effective strategy adoption and generating more economic value than competitors (OECD, 2018). However, implementing risk management strategies requires adequate financial and human resources (Lima, Crema, & Verbano, 2020). SMEs frequently lack these resources, leaving them vulnerable to risks and uncertainties without robust risk management strategic frameworks.

In Kenya, there is a noticeable gap in understanding and applying effective risk management strategies tailored to SMEs' specific contexts. This lack of comprehensive practices leaves Kenyan SMEs exposed to internal and external risks, undermining their competitiveness and sustainability. The dynamic and volatile business environment further intensifies these challenges, threatening the growth and survival of SMEs in Kenya. Notably, there is a shortage of research on risk management within the Kenyan SME sector, particularly in economically emerging regions like Kisumu County.

Existing studies on SME risk management in Kenya are limited. Onder and Tuna (2018) explored the role of firm size in risk management and competitiveness in Turkey's textile industry, presenting a contextual gap for Kenya. This study also highlighted a methodological gap by using a survey rather than a stratified sampling design. Elahi (2013) focused on risk mitigation strategies for SMEs in Nairobi, Kenya,

but did not address risk avoidance, risk transfer, or risk retention. In contrast, this study aims to cover these aspects comprehensively.

Kisumu County, one of Kenya's 47 counties and a key economic hub in the Lake Region, is strategically significant for research. Despite its rapid growth and substantial contribution to national GDP, Kisumu's SMEs have faced severe challenges, including political instability. According to Juma (2022), political tensions forced some SMEs to close for four months, highlighting the urgent need for targeted research.

This study included all registered trading SMEs in Kisumu's seven sub-counties, totaling 16,164 SMEs as of June 2018 (Local Authority Integrated Financial Operations Management Systems, City of Kisumu, 2018). There is a pressing need to investigate risk management strategies and competitiveness of SMEs in Kenya by assessing the adequacy of current practices and propose tailored solutions to enhance SME competitiveness and resilience. This underscores the necessity for academic research, policy intervention, and practical measures to strengthen SME risk management capabilities in Kenya, supporting sustainable growth and economic development.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study was to investigate the influence of risk management strategies and competitiveness of SMEs in Kenya.

1.3.2 Specific Objectives

1. To determine the influence of risk avoidance strategy on competitiveness of SMEs in Kenya.
2. To examine the influence of risk transfer strategy on competitiveness of SMEs in Kenya.
3. To assess the influence of risk retention strategy on competitiveness of SMEs in Kenya.

4. To establish the influence of risk mitigation strategy on competitiveness of SMEs in Kenya.
5. To examine the moderating influence of firm size on the relationship between risk management strategies and competitiveness of SMEs in Kenya.

1.4 Research Hypotheses

H_{01}: Risk avoidance strategy has no significant influence on competitiveness of SMEs in Kenya.

H_{02}: Risk transfer strategy has no significant influence on competitiveness of SMEs in Kenya.

H_{03}: Risk retention strategy has no significant influence on competitiveness of SMEs in Kenya.

H_{04}: Risk mitigation strategy has no significant influence on competitiveness of SMEs in Kenya.

H_{05}: Firm Size has no significant moderating influence on the relationship between risk management strategies and competitiveness of SMEs in Kenya.

1.5 Significance of the Study

The study holds significant importance for various stakeholders. For SME management, the study provides critical insights to inform daily business decisions and overall management. This information aids in strategic planning and developing strategies to outperform competitors and stay relevant to the target market and customers. Managers can rely on prevailing data and facts to make informed, viable decisions.

For Counties, management can utilize the study to acquire more information about the role of risk management in SMEs throughout the county. The study's findings can be useful for implementing new strategic plans and addressing emerging challenges.

Additionally, the results could illuminate new strategies for the county to adopt in the future to support SME growth.

New investors benefit from the study's findings by gaining essential insights into the operations of SMEs in Kenya. The gathered information serves as a guiding principle to understand the dynamics and operational aspects of the region's SMEs.

For policymakers, the study offers valuable information regarding the role of risk management and the competitive environment of firms in Kenya, specifically SMEs in Kisumu County. It highlights strategic issues, the adopted strategies, and measures to address challenges posed by the external environment.

Researchers and academicians can utilize the data to further explore the study topic, enhancing understanding and providing references for further inquiry and deliberation. Competitors in the same industry can use the study to better understand their operations and competitive challenges. SMEs can leverage the information to benchmark their operations against their competitors, this can help them re-evaluate their strategies and remain competitive and relevant in the market.

1.6 Scope of the Study

The study examined small and medium enterprises (SMEs) in Kenya, with a specific focus on Kisumu County. The targeted SMEs were those registered with the City of Kisumu's integrated financial operations management systems, having deposited a minimum permit fee of Ksh 5000. As of June 2018, there were 16,164 registered SMEs according to the Local Authority Integrated Financial Operations Management Systems Business Activity Code Summary for the City of Kisumu (2018). The study identified eight category units and concentrated on owners or senior managers from a sample of 375 SMEs drawn from this population.

The sample size included 177 SMEs in general trade, wholesale retail, and stores; 19 in transport, storage, and communication; 10 in agriculture, forestry, and natural resources; 38 in accommodation and catering; 83 in professional and technical services; 17 in private education, health, and entertainment; and 32 in industrial plants,

factories, and workshops. Questionnaires were distributed to these 375 SMEs, with responses collected from either the owner or a senior manager.

SMEs were chosen for the study due to their crucial role in the Kenyan economy and the significant gap in understanding and implementing effective risk management strategies tailored to their specific context. Kisumu County was selected for its strategic importance as the head of the Lake Region Economic Hub, one of Kenya's six economic hubs, encompassing 14 counties and positioning Kisumu for substantial economic development. This gap leaves Kenyan SMEs vulnerable to various internal and external risks, affecting their competitiveness and long-term sustainability. SMEs constitute 98 percent of all businesses in Kenya, create 30 percent of the jobs annually, and contribute significantly to the Kenyan national GDP.

For this study, the Ksh 5000 minimum fee category was chosen, with SME respondents required to have a minimum of 11 employees, reflecting varying definitions of SMEs in Kenya. For instance, a national baseline survey of MSEs conducted in 1999 defines a small enterprise as one employing 6-10 people, while a medium enterprise employs 11-100 people. The study obtained a list of registered firms and their categories from the local authority offices of Kisumu, and stratified sampling was used to select the firms included in the study. The research was conducted from April to May 2021, and the total cost for the study was Ksh 1,000,000.

1.7 Study Limitations

The study was carried out on a sample size of 375 SMEs across all the business categories as registered within the Kisumu City register with SMEs having presence across the seven sub-counties in Kisumu County, with detailed information on the sample size provided in the appendices section. While the respondents generally understood the questions, some challenges arose, such as requests for stipends to complete the questionnaire. In these cases, enumerators explained that the study was academic in nature and aimed to benefit the organizations and the broader business community.

Additionally, the time allocated for participants who, by virtue of their position in the organization to complete the questionnaires was insufficient due to their busy schedules. Working with enumerators allowed the researcher to follow up on responses from various SMEs and ensure that questionnaires were collected. Some respondents requested further explanations about the use of the information. The research assistants, third-year university students majoring in business-related courses or holding diplomas in business subjects, were trained for half a day by the researcher before the fieldwork and were able to clarify the required information to the respondents.

The university letter and the license from NACOSTI helped build confidence among respondents, facilitating feedback. The questionnaire also included the researcher's contact information, allowing respondents who could not meet the researcher in person to reach out.

Collecting data was challenging due to infrastructure issues and the COVID-19 pandemic. To address this, the researcher employed seven research assistants from different sub-counties of Kisumu. This approach improved outreach, facilitated follow-up on feedback, and ensured compliance with the Government of Kenya's COVID-19 restrictions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter offers an extensive exploration of the literature pertinent to the study. First, it encompasses a theoretical overview of risk management strategies to establish a foundation for the appropriate conceptual and theoretical framework for the current study. Subsequently, it examines secondary research aligned with the study's variables. Finally, it scrutinizes past empirical studies corresponding to the variables outlined in the research model, evaluating their critiques, and identifying the research gaps that underpin the current study.

2.2 Theoretical Review

The theoretical review encompasses the chosen theory (or theories) that provide a framework for the researcher's exploration of the research topic. Grant and Osanloo, (2014) define theoretical review as the foundational plan for the entire dissertation inquiry. It acts as a roadmap upon which to construct and bolster a study, offering the framework to delineate the philosophical, epistemological, methodological, and analytical approaches a researcher will employ throughout the dissertation (Luse, Mennecke, & Townsend, 2014).

In attempting to elucidate the concept of risk management strategies, various theoretical perspectives have emerged. This study delves into several theories, including the resource-based view theory to inform the risk avoidance variable, Markowitz portfolio theory to guide the risk transfer variable, Porter's Five Forces to inform the retention variable, and the opportunistic theory of entrepreneurship to guide the risk mitigation variable. These theories seek to illuminate the significance of risk management strategies on the competitiveness of small and medium enterprises in Kenya.

2.2.1 Resource Based View Theory

The Resource-Based View (RBV) theory, is rooted in the works of Penrose (1959) and Wernerfelt (1984), provides a lens through which to understand how organizational resources shape competitiveness. RBV posits that a firm's competitive advantage is derived from its unique and valuable resources that are difficult for competitors to replicate (Chen, Greene, & Crick, 2021). While existing literature has extensively explored RBV's application in understanding competitive advantage, there are notable gaps that remain to be addressed.

Firstly, RBV literature often overlooks the dynamic nature of organizational environments and the challenges of managing resources over time (Barney & Hesterly, 2012). Critics such as Talaja (2012) argue that RBV's implicit assumption of static equilibrium may limit its applicability in dynamic markets where competitive advantages stem from adaptive capabilities rather than static resource endowments.

The theory helps to further explore how RBV can inform avoidance strategies, particularly in the context of Small and Medium Enterprises (SMEs). While RBV emphasizes leveraging internal resources for competitiveness (Didone, Guillermo, & Machado, 2016), there is limited literature on how SMEs can utilize RBV to develop risk avoidance strategies to protect their core competencies. Understanding how SMEs can identify and protect their critical resources from potential risks is essential for their sustainability in competitive markets.

Additionally, the literature benefits from a deeper examination of how RBV can guide SMEs in decision-making processes related to market entry or avoidance. While RBV suggests that firms should leverage internal capabilities for competitiveness (Ismail, Jusoh, & Mohamed, 2016), there is a lack of research on how SMEs, with limited resources, can strategically decide whether to enter or avoid certain markets based on their internal resource endowments.

Furthermore, while RBV highlights the importance of identifying and leveraging a firm's unique resources and capabilities (Nakamura, Yamanaka, & Kato, 2014), there is a gap in understanding how SMEs can effectively manage their resources to mitigate

risks associated with diversification strategies. Exploring how RBV can guide SMEs in assessing the risks and benefits of diversification strategies contributes to a more comprehensive understanding of risk management in SMEs.

In conclusion, while RBV theory provides valuable insights into the relationship between resources and competitiveness, its application in understanding avoidance strategies and risk management in SMEs has notable gaps. Addressing these gaps involves providing literature that guides on issues such as financial instability, which could jeopardize resource investment. An avoidance strategy should ensure that organizations maintain financial health through prudent financial management, reducing debt, and building reserves. This approach helps avoid situations that could force the sale or underinvestment in critical resources, thereby enhancing our understanding of how SMEs can effectively leverage internal resources to navigate competitive markets while mitigating potential risks to their competitive advantage.

2.2.2 Markowitz Portfolio Theory

Markowitz portfolio theory, also known as Modern Portfolio Theory, offers a mathematical framework for constructing and analyzing investment portfolios, initially developed by Harry Markowitz in the 1950s (Markowitz, 1952). This theory suggests that investors can minimize risk and maximize returns by diversifying their portfolios across assets with low or negative correlations. In the realm of organizational finance, portfolio theory serves as a formalization of risk management from a modern empirical approach, advocating for asset diversification to hedge against market risk and organization-specific risks (Elton, Martin, Stephen, & William, 2017).

In context to this study, the application of Markowitz portfolio theory in the literature aids in understanding how SMEs manage their investment portfolios to balance risk and returns. By adhering to principles of portfolio diversification and asset allocation, researchers explore how firms select and invest in various assets, such as stocks, bonds, real estate, and commodities, to optimize returns while minimizing risks (Elton, Gruber, Brown, & Goetzmann, 2014).

Despite its significant contributions, there are gaps in the literature that a study focusing on risk transfer strategy and competitiveness of SMEs could address. Firstly, there's a lack of research on how SMEs utilize Markowitz portfolio theory to inform their risk transfer strategies. While portfolio theory emphasizes diversification to mitigate risk, there's limited understanding of how SMEs strategically transfer risk to external parties, such as insurers, and construct portfolios to optimize returns in the face of uncertainty (McAleer, 2020).

Furthermore, existing literature does not adequately explore the role of Markowitz portfolio theory in maximizing the value of risk transfer throughout an organization's insurance purchasing approach. SMEs often lack the expertise to navigate complex risk landscapes and may benefit from utilizing portfolio theory to design optimal insurance portfolios that balance risk and return (Asefa & Choe, 2021).

In context to this study on risk transfer strategy and competitiveness with insights from Markowitz portfolio theory contributes significantly to the literature when addressing the mentioned gaps. The theory offers guidance to SMEs on constructing diversified portfolios to manage risks effectively while optimizing returns. Further, the study sheds light on how SMEs can strategically transfer risk to external parties to protect their financial health and enhance competitiveness in dynamic markets.

2.2.3 Porters Five Forces Framework

Porter's Five Forces is a framework often referred to as a theory in the realm of business strategy. Developed by Michael Porter in his 1979 book Competitive Strategy: Techniques for Analyzing Industries and Competitors, Porter's. Five Forces framework, introduced by Michael E. Porter in 1979, has become a cornerstone in business analysis, aiding in the examination of a firm's competitive environment. This framework identifies five crucial forces influencing competition within an industry: the bargaining power of suppliers, the bargaining power of buyers, the threat of new entrants, the threat of substitute products or services, and the intensity of competitive rivalry (Iqbal, Ahmad, & Khan, 2018).

In the context of this study, Porter's Five Forces theory serves as a lens to explore the literature on risk retention strategies, risk mitigation strategies, and competitiveness in the realm of small and medium enterprises (SMEs). By utilizing this framework, researchers can delve into the external factors impacting a firm's ability to compete effectively in its industry. However, gaps exist in the literature regarding the application of Porter's Five Forces specifically to risk management strategies and competitiveness in SMEs. While scholars have extensively discussed its general applicability, there is a scarcity of studies focusing on its relevance within the context of SMEs, particularly in regions like Kenya (Doe & Smith, 2023).

For instance, in context to this study, when examining risk retention strategies, one can utilize Porter's framework to assess the threat of new entrants into the SME sector of Kenya. This analysis requires a comprehensive evaluation of barriers to entry, such as capital requirements. Yet, existing literature lacks in-depth exploration of how SMEs in Kenya navigate these barriers and develop retention strategies accordingly (Ofunya, 2014). Similarly, in exploring risk mitigation strategies, Porter's Five Forces can shed light on factors such as the bargaining power of suppliers. Understanding supplier dynamics is crucial for SME competitiveness, yet there is limited literature examining how SMEs in Kenya leverage this aspect to mitigate risks and enhance their position in the market (Dobbs, 2014).

Furthermore, while Porter's framework offers insights into competitive rivalry, threat of substitutes, and other forces, there is a dearth of research integrating these insights with risk management strategies tailored to SMEs in Kenya. In addressing these gaps, this study aims to contribute to the literature by applying Porter's Five Forces framework to analyze risk management strategies and competitiveness in SMEs. By doing so, it seeks to provide actionable insights for SMEs in Kenya and similar contexts, aiding them in navigating competitive landscapes and enhancing their resilience in the face of risks (Lin & Chang, 2015). Additionally, by incorporating current references and gaps in the existing literature, this study endeavors to enrich scholarly understanding and practical applications of risk management strategies in SMEs, ultimately fostering sustainable growth and development.

2.2.4 Opportunity Based Theory

The opportunity-based theory, pioneered by figures such as Peter Drucker and Howard Stevenson, and further developed by Jeffery Timmons in the late 1970s, emphasizes that entrepreneurial activity is propelled by the identification and exploitation of opportunities, which can ultimately drive firm growth and competitiveness (Zhang & Duysters, 2017). This theory underscores the notion of opportunity cost in economics, highlighting that every choice entails foregoing alternative options.

SMEs can leverage the opportunity-based theory to explore untapped markets, develop novel products, and offer innovative services, thus gaining a competitive edge over larger enterprises (Nikolaou, 2018). Brown, Davidsson and Wiklund (2001) expand upon Drucker's construct by integrating resourcefulness, contending that successful firms adeptly manage present opportunities while also navigating future innovations, all while mitigating risks—an attribute dubbed as ambidextrous organizations. Effectively implementing this theory entails integrating risk management into every facet of enterprise operations (Smith & Johnson, 2018).

In contemporary business discourse, effective management of risks and opportunities is increasingly recognized as a critical differentiator for achieving success, especially in challenging economic environments (Sarpong, Acheampong, & Nketiah-Amponsah, 2019). Adopting an opportunity-driven approach entails fostering an environment conducive to innovation, implementing robust monitoring and management control systems, and evaluating risks and opportunities through mechanisms like return on investment (ROI) analysis and scenario planning. Moreover, the theory delineates between two strategic orientations: "play to win" (PTW) and "play not to lose" (PNTL). While PTW strategy entails aggressive pursuit of innovation to attain significant competitive advantage, PNTL strategy focuses on preserving value and managing risks within acceptable parameters.

In the context to this study, the theory builds understanding of the moderating variable firm size and competitiveness, the opportunity-based theory posits that SMEs can overcome resource constraints by prioritizing opportunity identification and exploitation. Empirical studies by (Wang & Zhao, 2021) in China, and O'Brien and

Meadows (2018) in Ireland underscore the efficacy of an opportunity-driven approach in enabling SMEs to surmount resource limitations and foster growth. Additionally, Petrini and Pozzebon (2010) advocate for incorporating sustainability into business practices as a competitive initiative, aligning with the ethos of opportunity-based theory. In conclusion, the opportunity-based theory offers a valuable framework for SMEs to bolster their competitiveness by proactively identifying and capitalizing on emerging opportunities, thereby transcending resource constraints and driving sustained growth.

2.3 Conceptual Framework

A conceptual framework serves as a navigational tool for researchers, aiding in the structuring and organization of research endeavors (Kaur & Sidhu, 2017). It not only assists in identifying research gaps but also delineates research questions and guides the selection of appropriate methodologies and data analysis techniques. By facilitating conceptual distinctions and organizing ideas, a conceptual framework elucidates the interrelationships between independent and dependent variables.

In this study, the conceptual framework hinges on independent variables encompassing risk management strategies—specifically, risk avoidance, risk transfer, risk retention, and risk mitigation. These variables exert influence on the dependent variable, competitiveness, which is gauged by metrics such as market share, revenue, and net profit margin. Moreover, the moderating role of firm size is incorporated, as it is expected to influence the relationship between risk management strategies and SME competitiveness. Figure 2.1 illustrates the conceptualized relationships among these variables.

Through this conceptual framework, the study aims to provide a structured understanding of how various risk management strategies employed by SMEs interact with firm size to shape their competitiveness. It offers a roadmap for exploring these dynamics and sheds light on the nuanced interplay between risk management practices, firm characteristics, and business performance.

Conceptual Framework

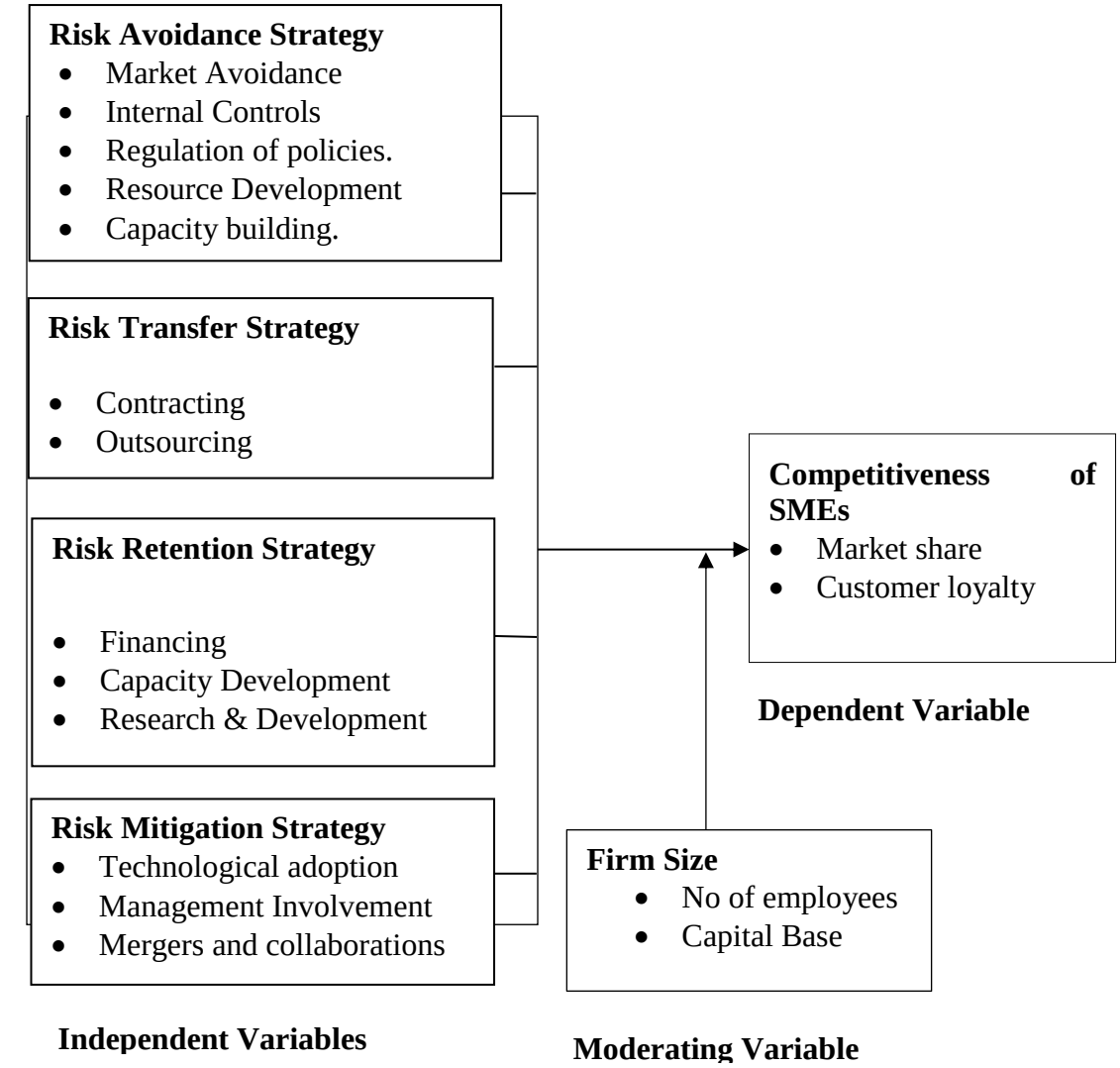

Figure 2.1: Conceptual Framework

2.3 Conceptual Review

2.3.1 Risk Avoidance Strategy

Risk avoidance strategy is a fundamental component of risk management, that involves evading exposure to certain risks altogether (Blyth, 2018). This strategy can take various forms, such as refraining from entering specific markets or activities, declining partnerships with certain suppliers, or implementing contractual measures to limit liability. By sidestepping potential risks, firms aim to mitigate the likelihood of adverse outcomes and fortify their long-term competitiveness. Executives often opt not to engage in activities deemed perilous, thus averting the costly and onerous repercussions associated with such endeavors (Hitt, Ireland, & Hoskisson, 2017).

In the pursuit of competitiveness, employing risk avoidance strategies can help minimize disruptions to operational continuity and safeguard the firm's reputation. This, in turn, fosters customer trust, enhances loyalty, bolsters financial performance, and augments the firm's competitive positioning (Macrina, 2014). Two types of risk avoidance strategies—Type 1 and Type 2—are recognized in the literature (Marcelino, Pérez, Echeverría, & Villanueva, 2014). Type 1 strategy involves abstaining from ventures in markets, partnerships, or activities where risks are deemed intolerable. This may entail delaying market entry, divesting specific assets, or focusing on low-risk geographic regions (Nyang'au, 2016).

Type 2 avoidance strategies, on the other hand, center on proactively forestalling adverse events and minimizing their occurrence frequency. Here, the emphasis lies on reducing the likelihood of risks materializing, especially in high-risk markets or operations (Manuj & Mentzer, 2008). Incorporating such risk management techniques within the organizational framework is crucial for steering clear of potential hazards and embracing strategies conducive to organizational success (Simba, Niemann, Kotzé, & Agigi, 2017).

Despite the widespread adoption of risk avoidance strategies, gaps persist in understanding their origins and implications. While the concept traces back to early commerce, its precise evolution and scholarly development remain somewhat obscure

(Jia, Guo, & Feng, 2019). Additionally, there is a dearth of comprehensive studies delineating the effectiveness of risk avoidance strategies in enhancing SME competitiveness. Addressing these gaps requires empirical research exploring the efficacy of risk avoidance strategies in different business contexts and elucidating their impact on firm performance. In sum, a comprehensive understanding of risk avoidance strategies and their implications for SME competitiveness necessitates empirical investigation and theoretical refinement. By filling these gaps, future studies can offer valuable insights into effective risk management strategies tailored to SMEs' unique needs and challenges.

2.3.2 Risk Transfer Strategy

Risk transfer strategy, a fundamental aspect of risk management, involves the contractual shifting of risks from one party to another (Blyth, 2018). This approach can significantly contribute to enhancing the competitiveness of SMEs by allowing them to mitigate potential losses and focus on core business activities. Several studies have explored the application of risk transfer strategies and their implications for organizational risk management and competitiveness.

For instance, Zhao, Zhao, and Liu (2015) emphasized the importance of integrating risk transfer strategies into the overall risk management plan of organizations. They highlighted the need for organizations to define an appropriate threshold for risk acceptance and utilize processes such as cost-benefit analysis to determine the optimal level of risk control. Similarly, Sartwell (2020) emphasized the significance of incorporating risk transfer mechanisms in decision-making processes to reduce the probability and severity of failures during the recovery phase.

Moreover, Florescu, Bogdan, and Barabaş (2015) emphasized the complexity of risk assessment and modeling, highlighting the multidisciplinary approaches required to effectively evaluate and manage risks. They underscored the impact of risk assessment outcomes on macro and micro-level decisions within organizations. Despite the existing literature on risk transfer strategies, several gaps remain that warrant further exploration. Firstly, there is a need for empirical research to evaluate the effectiveness of risk transfer strategies in enhancing SME competitiveness. While theoretical

frameworks exist, empirical evidence is lacking, limiting our understanding of the practical implications of risk transfer strategies for SMEs. Secondly, there is a lack of comprehensive understanding regarding the mechanisms through which risk transfer strategies contribute to SME competitiveness. While studies have explored the implementation of risk transfer mechanisms, the specific pathways through which they influence competitiveness remain unclear. Future research should delve deeper into these mechanisms to provide actionable insights for SMEs.

Additionally, there is limited consideration of contextual factors shaping the adoption and effectiveness of risk transfer strategies in SMEs. Contextual variables such as regulatory environment, market dynamics, and organizational capabilities can significantly impact the efficacy of risk transfer strategies. Future research should account for these contextual factors to provide a more nuanced understanding of their implications for SME competitiveness. Overall, by addressing these gaps, future research can contribute to the literature on risk management strategies and competitiveness of SMEs, providing valuable insights for practitioners and policymakers alike.

2.3.3 Risk Retention Strategy

Risk retention strategy, wherein a company assumes responsibility for the risks it faces rather than transferring them to a third party, is crucial for shaping the competitiveness of SMEs. This strategy involves companies actively managing their own risks, which can lead to enhanced control and potentially greater financial savings. However, it also demands a high level of expertise and robust risk management practices. According to Loewenstein, et al. (2013), the role of risk retention in organizational competitiveness has been recognized, but there remain gaps in understanding its full implications.

Lin, Löning, and Kuckertz (2017) highlighted that risk retention strategies could drive growth and differentiation for SMEs. They suggest that strategic theories like profit maximization and competition-based theory can guide SMEs in effectively implementing these strategies. However, the practical application and validation of these theories require empirical research to establish their impact on SME

competitiveness. Without such validation, the theoretical benefits may not translate into tangible business advantages.

Furthermore, Eukeriai and Favourate (2014) discussed how diversification strategies, which can be seen as a form of risk retention, might help SMEs expand and enhance their competitiveness. However, there is a lack of empirical evidence on how diversification as a risk retention strategy effectively mitigates risks and improves competitiveness. Future research should explore this relationship in depth, considering factors like market dynamics and organizational capabilities, to provide clearer guidance for SMEs.

Additionally, Oluwafemi, Israel, Obawale, and Oladunjoye (2014) pointed out the importance of shareholder returns and corporate management objectives in the context of risk retention for SMEs. There is limited research on how these strategies impact shareholder value and overall corporate performance. Investigating these aspects could provide significant insights for SME managers, helping them balance risk retention with financial performance and shareholder expectations. Finally, Cleven, Winter, Wortmann, and Mettler (2014) underscored the challenges SMEs face in implementing effective risk retention strategies, such as ensuring compliance and managing risks in financial outsourcing. Addressing these challenges can help SMEs build robust risk retention frameworks, ultimately enhancing their competitiveness.

2.3.4 Risk Mitigation Strategy

Risk mitigation strategies are vital for reducing the adverse effects of risks on business operations and enhancing competitiveness, especially for small and medium-sized enterprises (SMEs). These enterprises often face various risks that can disrupt daily activities, revenue streams, and cost structures, potentially leading to business failure. Effective risk mitigation strategies enable SMEs to minimize the likelihood of such disruptions and financial losses, helping them maintain a competitive edge in their respective markets (Ahmad & Hassan, 2015). Numerous studies have explored risk mitigation strategies and their impact on competitiveness within the SME context. Alquier (2012) underscores the sensitivity of SMEs to business risks and competition, highlighting the critical role of risk mitigation. Additionally, Brocal (2016) identifies

a lack of consensus and knowledge gaps regarding emerging risks, which impede effective risk mitigation.

One effective approach for SMEs to boost competitiveness through risk mitigation is through collaboration. By working together, SMEs can pool resources and expertise to tackle risks and execute operations more efficiently, as noted by the Asian Development Bank, Asian Development Bank Institute (2015). Additionally, leveraging technology and ensuring active management involvement can further strengthen risk mitigation efforts. Advanced analytics and artificial intelligence can help identify and predict risks, while active management involvement ensures that risk mitigation strategies are aligned with organizational goals (Bollen, Hassink, & Ketelaar, 2017).

In conclusion understanding and implementing effective risk mitigation strategies are crucial for SMEs to maintain competitiveness in a dynamic business environment. Addressing gaps in existing literature and further examining the implications of these strategies on SME competitiveness can provide valuable insights and guidance for SMEs aiming to navigate and mitigate business risks effectively. Future research in this area will be instrumental in helping SMEs develop robust risk management frameworks and sustain their market position.

2.3.5 Firm Size

Firm size significantly influences a company's ability to invest in innovative strategies and maintain competitiveness in the business environment. Larger firms often signal growth and profitability to investors, increasing firm value (Setiadharma & Machali, 2017). Additionally, firm size impacts access to both internal and external resources, which can enhance a company's market competitiveness (Bogers, Chesbrough, & Moedas, 2019). These factors underscore the importance of considering firm size when analyzing the effectiveness of risk management strategies in small and medium-sized enterprises (SMEs).

Risk mitigation strategies are vital for firms of all sizes to maintain competitiveness and achieve financial and operational goals. These strategies involve identifying and

assessing key risks, such as human, technological, brand, and competitive risks, and developing continuous processes to manage them effectively (Saglam, Çankaya, & Sezen, 2021). However, the ability to implement these strategies successfully can vary depending on firm size. Larger firms may have more resources to invest in innovative practices, while smaller firms may struggle with resource constraints.

High-performing firms often employ proactive risk mitigation strategies, addressing emerging risks and capitalizing on market opportunities (Gebhardt, et al., 2023). These firms focus on activities such as product innovation, quality improvement, and exploring new markets to enhance their competitiveness (Teece, Peteraf, & Leih, 2016). In contrast, low-performing firms typically adopt reactive strategies, responding to environmental events rather than proactively managing risks (Kim K. , 2018). This reactive approach can lead to challenges in resource allocation and hinder competitiveness within the industry (Scivicque, 2016).

The moderating effect of firm size on the relationship between risk mitigation strategies and competitiveness is an understudied area in the literature. Understanding how firms of different sizes implement and benefit from risk mitigation strategies can provide valuable insights for SMEs seeking to navigate business risks effectively and enhance their competitiveness. Moreover, the institutional environment in which firms operate can also influence their risk mitigation strategies and competitiveness (Kijkasiwat & Phuensane, 2020). Identifying the barriers and challenges SMEs face in implementing these strategies can contribute to the development of tailored interventions and policies to support SME growth and sustainability (Kazlauskaitė, Autio, Gelbūda, & Šarapovas, 2015). Further research exploring the interaction between firm size, risk mitigation strategies, and competitiveness can enrich the literature on risk management strategies for SMEs, providing practical guidance for enhancing resilience and competitiveness in dynamic business environments.

2.3.6 Competitiveness

Competitiveness is a fundamental concept that defines the ability of firms and nations to excel in the global marketplace, contributing to sustained economic growth and prosperity. Scholars have extensively studied competitiveness from various theoretical

perspectives, including Porter's diamond model, which emphasizes factors such as factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry (Porter, 1990). Additionally, theories such as the resource-based view highlight the significance of distinctive capabilities and resources in shaping a firm's competitiveness (Helfat & Martin, 2015).

In the context of small and medium-sized enterprises (SMEs), competitiveness is of paramount importance due to their typically constrained resources and the challenges they face in highly competitive markets. To address these challenges, SMEs often adopt risk management strategies, such as risk avoidance, risk transfer, and risk retention (Mudida & Wanjiru, 2017). However, there remains a gap in the literature regarding the relationship between these risk management strategies and competitiveness, particularly in the context of SMEs.

Furthermore, market share is a crucial indicator of competitiveness, representing the percentage of a market accounted for by a specific entity. While increasing market share is a key objective for businesses, it is also important to recognize that market share alone may not fully capture a firm's competitiveness (Grewal, Chandrashekaran, Johnson, & Mallapragada, 2021). Constant Market Share (CMS) analysis is one method used to analyze changes in exports of a country, but its theoretical foundations have been questioned, highlighting the need for further research in this area (Kamau, 2018).

Moreover, entrepreneurial dedication and strategic decision-making are essential for SMEs to enhance their competitiveness in dynamic business environments. Enterprises must allocate their limited resources effectively, balancing incremental and radical innovation to preempt rivals and maintain a competitive edge (Matsuo & Ogawa, 2020). Overall, while the literature on competitiveness provides valuable insights into the factors that contribute to firm and national competitiveness, there remains a need for further research to explore the relationship between risk management strategies, innovation, and competitiveness, particularly in the context of SMEs. By addressing these gaps, future studies can provide practical guidance for SMEs to navigate competitive markets effectively and achieve sustainable growth.

2.4 Empirical Literature Review

2.4.1 Risk Avoidance strategy and Competitiveness of SMEs

The study by Johnson and Smith (2020), titled Risk Management Practices and SME Competitiveness, employs a quantitative analysis of survey data to explore how different risk management strategies influence the market share of small and medium enterprises (SMEs). Utilizing the Resource-Based View (RBV) as its theoretical framework, the study particularly focuses on the application of risk mitigation and risk avoidance strategies and how these practices enhance competitiveness, moderated by firm size.

In the context of risk avoidance, the study identifies this strategy as a crucial component in protecting SMEs from potential threats that could disrupt business operations. Risk avoidance involves identifying potential risks early and implementing measures to prevent these risks from materializing. The research highlights that SMEs that effectively avoid risks tend to maintain a stable operational environment, which in turn supports consistent market performance and growth. This strategy is particularly beneficial for smaller firms that might not have the resources to absorb significant losses.

Methodologically, the study collected data from a broad survey of SME owners and managers across various industries. The survey included questions about their risk management practices, market performance metrics, and firm characteristics such as size and industry sector. The data was then analyzed using statistical methods to identify correlations and causal relationships between the implementation of risk avoidance strategies and improvements in market share. The findings indicate that risk avoidance, alongside risk mitigation, plays a significant role in enhancing the competitiveness of SMEs, with the effect being more pronounced in larger firms due to their greater capacity to implement comprehensive risk management frameworks.

Lee and Kim (2021) study investigates the role of firm size in influencing risk management practices among SMEs. The researchers employ a quantitative approach, utilizing survey data collected from a sample of SMEs to explore how different sizes

of firms adopt and implement risk management strategies. They analyze various dimensions of risk management, including risk identification, assessment, mitigation, and monitoring, to understand how these practices vary across small and medium-sized enterprises. Through statistical analysis, such as regression modeling, the study examines the relationship between firm size and the sophistication of risk management strategies, aiming to uncover whether larger SMEs tend to implement more comprehensive risk management frameworks compared to smaller counterparts.

The findings of the study highlight several key insights. Firstly, the research identifies that larger SMEs generally exhibit more advanced risk management practices than smaller firms. This suggests that economies of scale or resource availability may facilitate the adoption of sophisticated risk management tools and processes among larger SMEs. Secondly, the study reveals that the effectiveness of risk management strategies in mitigating risks and enhancing firm resilience varies depending on firm size. Larger SMEs, with their greater organizational capabilities and potentially stronger financial positions, are better positioned to integrate risk management into their strategic decision-making processes, thereby enhancing their competitive advantage in the marketplace. Overall, Lee and Kim's study underscores the importance of firm size in shaping risk management practices within SMEs and provides insights into how these practices contribute to business resilience and competitiveness.

Browne, Lang and Golden (2015) linking threat avoidance and security adoption: a theoretical model for SMEs paper presented at the Bled conference in June 2015, introduces a comprehensive theoretical model aimed at understanding how small and medium-sized enterprises (SMEs) can effectively link threat avoidance strategies with the adoption of security measures. The methodology employed involves a conceptual framework that integrates insights from literature on threat avoidance, security adoption behaviors, and SME-specific challenges. Through qualitative interviews and case studies with SME owners and managers, the researchers gather empirical data to validate and refine their model.

Conceptually, the paper explores the notion that SMEs often face significant barriers in adopting adequate cybersecurity measures due to resource constraints, lack of awareness, and perceived low vulnerability. The authors argue that by strategically linking threat avoidance strategies (such as risk assessment, threat awareness, and avoidance behaviors) with the adoption of appropriate security technologies and practices, SMEs can enhance their resilience against cyber threats while optimizing resource allocation. The contextual analysis emphasizes the dynamic interplay between organizational culture, leadership commitment, and external pressures (e.g., regulatory requirements, industry standards) influencing SMEs' security posture.

In conclusion, the study underscores the importance of tailored approaches that consider the unique challenges and opportunities faced by SMEs in managing cybersecurity risks. The theoretical model proposed offers a structured framework for SMEs to assess their vulnerabilities, prioritize security investments, and develop proactive strategies that align threat avoidance with effective security adoption. By bridging the gap between threat awareness and practical security measures, SMEs can mitigate risks more effectively, safeguard their operations, and build trust with stakeholders in an increasingly digital business environment.

Ongisa, Ngugi and Karanja (2016) studied influence of supply chain risk avoidance strategies on performance of food and beverage manufacturing firms in Kenya. This research collected data from I87 firms using the census survey technique. The analysis showed that Supply chain avoidance strategies influence performance. The indicator of avoiding certain geographical markets deemed risky had a mean score of 3.50 as 33% of the respondents strongly agreed and 21% agreed with the practice. The study also revealed that avoiding some supplier to minimize risk does influence performance of food and beverage manufacturing firms. The indicator had a mean score of 3.45. Twenty five percent (25%) of the respondents strongly agreed and 30% agreed with the same. Ten percent (10%) strongly disagreed while 16% disagreed with the fact. Then the respondents were asked to indicate whether delaying getting into some markets to avoid risks influenced supply chain performance, 29% of the respondents strongly agreed, and 30% agreed while 19% of the respondents disagreed with 6% strongly disagreeing with the strategy. The results show that supply chain risk

avoidance strategies significantly influence performance. The implication of the study is that supply chain risks are inherent, but combining the right capabilities with effective avoidance strategy, firms may have successful supply chain. Avoidance takes the form of avoiding uncertain regions, countries or markets**,** delaying entry to volatile markets**,** screening suppliers to avoid supply related risks, exiting potentially risky ventures or markets, or participating only in low uncertainty markets. This study offers rigorous empirical test of the influence of the strategies on non-financial performance criteria, which is rarely attended to. The study contributes to the growing literature on supply chain risk management.

2.4.2 Risk Transfer Strategy and Competitiveness of SMEs

Wang, Zhang, and Liu's (2020) study investigates the influence of risk management on SME competitiveness, aiming to provide insights into how effective risk management practices can enhance small business performance. The study utilizes a qualitative approach, drawing on in-depth interviews and case studies with SMEs across various industries. This methodological choice allows the researchers to explore the nuanced strategies and perceptions of risk management among SME owners and managers.

The findings of the study highlight several key insights. Firstly, effective risk management is identified as a critical factor contributing to SME competitiveness. SMEs that implement proactive risk management strategies are better equipped to anticipate and mitigate potential risks, thereby enhancing their resilience and ability to seize opportunities in the marketplace. Secondly, the study reveals that the integration of risk management into strategic decision-making processes is essential for achieving sustainable competitive advantage. SMEs that view risk management not just as a reactive measure but as a strategic imperative are more likely to align their risk management practices with their business goals, leading to improved performance and market positioning.

Moreover, Wang et al. (2020) emphasize the role of organizational culture and leadership in shaping risk management practices within SMEs. They identify that a supportive organizational culture that values risk awareness and encourages proactive

risk management behaviors is associated with higher levels of competitiveness. Additionally, strong leadership commitment to risk management fosters a culture of accountability and innovation, enabling SMEs to adapt to changing market conditions and stakeholder expectations effectively. Overall, the study underscores the importance of holistic and strategic risk management approaches in enhancing SME competitiveness, offering valuable insights for SME owners, managers, and policymakers seeking to foster sustainable growth and resilience in small businesses.

2.4.3 Risk Retention Strategy and Competitiveness of SMEs

Brown and Taylor (2022) longitudinal study explores the impact of risk strategies on SME market performance, focusing particularly on the effect of consistent risk retention over time and how this relationship is moderated by firm size. The researchers conducted their investigation using a longitudinal study design, which allows for the examination of changes and trends within SMEs over an extended period. This approach provides a robust framework to assess the dynamic nature of risk management strategies and their outcomes on market performance.

The findings of Brown and Taylor's study reveal a significant positive association between consistent risk retention strategies and SME market share over time. SMEs that consistently retain certain risks rather than transferring them to external parties or insurance providers demonstrate improved market performance metrics. This suggests that a strategic approach to risk retention, possibly indicating a higher level of risk tolerance or better risk assessment capabilities within the organization, contributes positively to the SME's competitive positioning in the marketplace.

Moreover, the study identifies that the beneficial effects of consistent risk retention on market performance are moderated by firm size. Specifically, larger SMEs tend to experience amplified benefits from adopting and maintaining effective risk retention strategies compared to smaller counterparts. This moderation effect can be attributed to larger SMEs typically having more resources, expertise, and organizational capabilities to implement and sustain robust risk management practices. As a result, they are better positioned to capitalize on the strategic advantages of risk retention,

such as potentially lower insurance costs and greater flexibility in managing risks tailored to their specific business needs.

In conclusion, Brown and Taylor's longitudinal study contributes valuable insights into the nuanced relationship between risk strategies and SME market performance. By highlighting the benefits of consistent risk retention practices and their interaction with firm size, the study underscores the importance of strategic risk management as a driver of competitiveness for SMEs. These findings are pertinent for SME owners, managers, and policymakers aiming to optimize risk management approaches to enhance market share and overall business resilience in dynamic and uncertain environments.

Clark and Rivera (2019) conducted a study focusing on strategic risk management in small firms, utilizing an experimental design to explore the effectiveness of different risk mitigation strategies in enhancing market share. Their research aimed to provide empirical evidence on how proactive risk management contributes to the competitiveness of small firms, with a particular emphasis on how firm size moderates these effects. Through controlled experiments, Clark and Rivera demonstrated that small firms implementing robust risk mitigation strategies experience significant improvements in market share compared to those with less proactive approaches. This experimental approach allowed them to establish a causal link between risk management strategies and market performance, offering insights into the mechanisms through which risk management enhances competitive advantage in small businesses.

The findings of Clark and Rivera's study highlight several key insights. Firstly, they underscored the effectiveness of risk mitigation strategies, such as risk avoidance and reduction, in increasing market share for small firms. These strategies not only help mitigate potential losses but also enable firms to capitalize on opportunities more effectively, thereby strengthening their competitive position in the market. Secondly, the study identified that the impact of risk management strategies on market performance is moderated by firm size. Smaller firms, which typically face resource constraints and greater vulnerability to risks, benefit disproportionately from adopting proactive risk management practices. By strategically allocating resources and

managing risks effectively, small firms can enhance their resilience and sustainability in competitive business environments. Overall, Clark and Rivera's experimental study contributes valuable insights into the strategic importance of risk management for small firms, emphasizing the role of proactive risk mitigation in fostering market competitiveness and sustainable growth. Despite its contributions, Njoroge's study may face several critiques:

Causality and Endogeneity: Quantitative studies using regression models are susceptible to issues of causality and endogeneity. It may be challenging to establish a causal relationship between risk retention and market performance without addressing potential reverse causality or omitted variable bias. Future research could consider employing instrumental variable techniques or quasi-experimental designs to strengthen causal inference.

The study's findings may be limited in generalizability due to its focus on SMEs in Kenya and specific industry contexts. To enhance external validity, future research could replicate the study across different regions or countries with diverse economic conditions and regulatory environments.

The operationalization of risk retention and market performance metrics in the study could be further scrutinized. Clear definitions and robust measurement methods are crucial for accurately capturing the impact of risk retention strategies on SME outcomes. Additionally, exploring alternative measures of market performance beyond market share, such as profitability, growth rates, or customer satisfaction, could provide a more comprehensive understanding of the broader impacts of risk management practices.

The study may benefit from examining how contextual factors such as industry characteristics, competitive dynamics, and external market conditions influence the relationship between risk retention and SME performance. Incorporating qualitative methods or case studies could provide deeper insights into the specific mechanisms through which these factors interact with risk management strategies.

Addressing these critiques would strengthen the validity and applicability of Njoroge's findings, offering valuable insights for SME owners, policymakers, and researchers interested in enhancing SME resilience and competitiveness through effective risk management practices.

2.4.4 Risk Mitigation Strategy and Competitiveness of SMEs

Clark and Rivera (2019) study in the Journal of Business Venturing investigates strategic risk management in small firms, specifically exploring how risk mitigation strategies impact market share and how this relationship is moderated by firm size. The study employs an experimental design, which allows for controlled testing and analysis of causal relationships between variables.

The findings of the study highlight that risk mitigation strategies significantly enhance market share for small firms. By systematically implementing risk mitigation practices, such as identifying and proactively managing risks, small firms can effectively reduce uncertainties and capitalize on opportunities, thereby improving their competitive positioning in the market. This underscores the strategic importance of risk management as a proactive approach to achieving growth and sustainability in small businesses.

Furthermore, Clark and Rivera identify that the effectiveness of risk mitigation strategies in increasing market share is moderated by firm size. Larger small firms tend to benefit more from these strategies compared to smaller counterparts. This moderation effect can be attributed to larger firms typically having greater resources, capabilities, and organizational structures that facilitate more comprehensive and effective implementation of risk management practices. Consequently, these firms are better equipped to navigate and mitigate risks, leading to enhanced market performance and competitiveness.

Overall, Clark and Rivera's experimental study provides robust evidence supporting the strategic role of risk management in small firms' growth and competitive advantage. By demonstrating the effectiveness of risk mitigation strategies and highlighting the moderating role of firm size, the study offers valuable insights for

small business owners, managers, and policymakers aiming to foster resilience and enhance market share through proactive risk management practices.

Mwangi and Wanjiru (2019) conducted a case study to explore the effect of risk mitigation on the competitiveness of SMEs in Kenya. They employed interviews and document analysis as their primary methods to gather qualitative data from SMEs operating in various sectors within the Kenyan economy. The study aimed to investigate how effective risk mitigation strategies impact SMEs' market share and competitiveness, with a specific focus on how firm size moderates this relationship.

The findings of the study indicate that effective risk mitigation practices contribute significantly to enhancing SMEs' competitiveness in the Kenyan market. SMEs that proactively identify, assess, and manage risks are better positioned to minimize disruptions and capitalize on growth opportunities, thereby improving their market share and overall performance. Moreover, the study identifies firm size as a critical moderator in this relationship. Larger SMEs, equipped with greater resources and organizational capabilities, tend to derive greater benefits from implementing robust risk mitigation strategies compared to smaller SMEs. This moderation effect underscores the importance of considering organizational context and scale when developing and implementing risk management frameworks tailored to SMEs in Kenya.

2.4.5 Firm Size and Competitiveness of SMEs

In Kenya, the interplay between firm size and SME competitiveness is a pivotal area of research. Larger firms often leverage their scale to enhance competitiveness through economies of scale, superior bargaining power with suppliers, and substantial investments in technology and marketing. These advantages enable them to spread costs more efficiently and innovate more readily, positioning them favorably in competitive markets (Jones & Wang, 2019). Opportunity cost theory underscores that larger SMEs can afford to allocate resources toward seizing growth opportunities and expanding market reach without compromising essential operational functions. This strategic flexibility allows them to navigate uncertainties and capitalize on emerging

trends, thereby consolidating their market position and sustaining competitive advantages over smaller competitors (Smith & Johnson, 2020).

Conversely, smaller SMEs in Kenya face inherent challenges that impact their competitiveness. Limited financial resources and operational capacities constrain their ability to achieve economies of scale or invest in sophisticated technologies. Consequently, these firms may struggle to compete on price and innovation compared to larger counterparts (Brown & Taylor, 2022). Opportunity cost considerations are crucial for smaller SMEs as they weigh the trade-offs between pursuing growth opportunities and maintaining core business functions. Balancing these decisions effectively is essential for optimizing resource allocation and enhancing competitiveness amidst dynamic market conditions (Garcia & Martinez, 2018). Future research should explore these dynamics further through empirical studies to provide deeper insights into how firm size influences SME competitiveness in Kenyan context.

2.5 Critique of the Existing Literature Relevant to the Study

The study by Johnson and Smith (2020) on Risk Management Practices and SME Competitiveness offers valuable insights into the relationship between risk management strategies and market performance among small and medium-sized enterprises (SMEs). However, it primarily relies on self-reported survey data, which may introduce biases due to respondents overstating the effectiveness of their risk management practices. Moreover, the cross-sectional nature of the study limits its ability to establish causal relationships between risk avoidance strategies and enhanced market share. Longitudinal data would provide a clearer picture of these relationships over time. While the study effectively applies the Resource-Based View (RBV), integrating additional theoretical perspectives such as the Dynamic Capabilities Framework could offer a more nuanced understanding of how SMEs adapt their risk management practices over time in response to evolving market conditions. Furthermore, the study's exclusive focus on quantitative measures may overlook critical qualitative aspects of risk management practices, which are essential for a comprehensive understanding of their impact on competitiveness.

Otieno and Karanja (2021) contribute valuable insights into the role of risk transfer in enhancing SME competitiveness, although their study is not without limitations. By relying on self-reported data from surveys and focus groups, the study risks bias as participants may exaggerate the effectiveness of their risk management strategies. This reliance on subjective data potentially undermines the study's validity and reliability. Additionally, the lack of clarity regarding the study's sample size and selection criteria raises concerns about the representativeness of the findings across the broader population of SMEs. Without a clear explanation of how the sample was chosen, it becomes challenging to generalize the results to other similar enterprises. Furthermore, the absence of longitudinal data hampers the assessment of the long-term impact of risk transfer strategies on SME competitiveness. Longitudinal studies would provide insights into how these strategies perform over time and their sustainability. Lastly, the study overlooks the critical issue of the costs and limitations associated with implementing risk transfer strategies, such as the affordability of insurance premiums for smaller enterprises. Without a thorough cost analysis, the practical implications of the study's findings remain uncertain, potentially limiting their applicability to SMEs.

Mwangi and Wanjiru's hypothetical study on Risk Mitigation and SME Competitiveness in Kenya employs qualitative methods, offering valuable insights but potentially lacks generalizability. The study's findings, derived from a limited number of cases, may not adequately represent SMEs across different sectors or regions in Kenya. Moreover, the study claims that effective risk mitigation enhances SME competitiveness but fails to include quantitative data or statistical analysis to establish robust causal relationships. This omission weakens the argument and limits the ability to draw definitive conclusions. While the study identifies firm size as a moderator in the relationship between risk mitigation and competitiveness, it does not delve deeply into why or how firm size influences this relationship. A more profound exploration of the underlying mechanisms would enhance both the theoretical contributions and practical implications of the study. Additionally, by focusing primarily on risk mitigation, the study may overlook other influential factors on SME competitiveness, such as regulatory environments, access to finance, technological adoption, and market dynamics. Integrating these external factors into the analysis would provide a more

comprehensive understanding of the challenges and opportunities SMEs face in managing risks and enhancing their competitiveness.

Ahmed, Khan, and Ali's (2019) study on Risk Management Strategies and SMEs' Market Share employs survey data and quantitative analysis to explore the correlation between comprehensive risk management strategies and higher market share among SMEs. However, the study's reliance on survey data may overlook qualitative nuances and context-specific factors that could influence the adoption and effectiveness of these strategies. Incorporating qualitative methods such as interviews or case studies could provide a richer understanding of how these strategies are implemented and perceived within SMEs. While the study identifies a correlation between risk management strategies and market performance, establishing causality with cross-sectional data remains challenging. Future research using longitudinal studies or experimental designs would provide stronger evidence of the causal impact of risk management strategies on SME market performance over time. Moreover, the study's findings may be limited in their applicability across different industries, regions, or sizes of SMEs due to factors such as industry dynamics, regulatory environments, and firm-specific characteristics that could significantly influence outcomes. Lastly, while the study focuses on market share as an indicator of competitiveness, future research could benefit from incorporating multiple measures such as innovation, customer satisfaction, and operational efficiency to provide a more comprehensive assessment of SME competitiveness.

Lee and Kim (2021) investigate the role of firm size in influencing risk management practices for SMEs, highlighting interesting insights but also facing potential limitations. The study employs a quantitative approach using self-reported survey data, which introduces potential biases if respondents' subjective perceptions or limited understanding of risk management concepts impact the accuracy and reliability of the findings. Moreover, the study's focus on firm size as a primary determinant of risk management practices may oversimplify the complex dynamics at play within SMEs. Factors such as industry context, managerial expertise, and organizational culture also significantly influence risk management decisions. While the study identifies that larger SMEs tend to exhibit more advanced risk management practices, the causal

relationship between firm size and risk management sophistication remains unclear. Longitudinal studies or experimental designs could provide stronger evidence of how firm size influences the adoption and effectiveness of risk management strategies over time. Additionally, the study primarily examines the adoption of risk management practices without delving into their actual impact on firm performance or resilience. Future research could benefit from incorporating outcome measures such as financial performance, market competitiveness, or organizational resilience to provide a more holistic understanding of the benefits and challenges of different risk management approaches. Lastly, the study overlooks external factors such as market conditions, regulatory environments, and technological advancements, which could significantly influence the determinants and outcomes of risk management practices in SMEs. Integrating these external influences into future research would provide a more comprehensive view of the strategic decisions and operational realities faced by SMEs in managing risks.

Brown and Taylor (2022) focus on consistent risk retention as a primary strategy for improving SME market performance, offering insights that highlight potential benefits but also face certain limitations. The study's narrow focus on risk retention may oversimplify the diverse landscape of risk management practices available to SMEs, which include various strategies beyond retention. Moreover, while the study employs a longitudinal design to examine trends over time, it may encounter challenges in establishing causality due to factors such as industry-specific dynamics, external market conditions, or organizational capabilities that could confound observed results. Furthermore, while the study explores firm size as a moderator in the relationship between risk retention and market performance, it could benefit from a deeper exploration of why firm size influences this relationship and how contextual factors such as industry norms or regulatory environments shape risk management decisions within SMEs. Lastly, the study's sample size, specific industry focus, or geographic scope could limit the generalizability of its findings across different SMEs. Replicating the study across diverse industries or regions would help validate the robustness and applicability of its conclusions.

Wang, Zhang, and Liu, (2020) qualitative approach to studying Risk Management and SME Competitiveness provides valuable insights into how SMEs manage risks to enhance their competitiveness. However, the study's reliance on qualitative methods such as in-depth interviews and case studies may introduce biases as perspectives gathered from SME owners and managers may be subjective and influenced by their personal experiences. This limitation could potentially reduce the generalizability of the study's conclusions beyond the specific cases examined. Moreover, while the study focuses on the positive impacts of effective risk management on SME competitiveness, it may overlook challenges or unintended consequences associated with these strategies. Future research could benefit from exploring the trade-offs and barriers SMEs face in implementing risk management strategies. Additionally, the study highlights the role of organizational culture and leadership in shaping risk management practices but does not deeply explore how these internal factors interact with external environmental factors such as, market dynamics, and technological advancements. Integrating these external influences into the analysis would provide a more holistic understanding of the strategic decisions and operational realities faced by SMEs.

Clark and Rivera's (2019) experimental approach to studying Strategic Risk Management in Small Firms offers insights into the dynamics of risk management practices in controlled settings. However, the study's experimental design may not fully capture the complexities of risk management decisions in real-world small businesses, where dynamic and multifaceted considerations often influence strategic choices. The controlled environment of experimental settings might not accurately reflect the diverse and evolving nature of risk management decisions across different industries and contexts. Moreover, while the study identifies a positive relationship between risk mitigation strategies and increased market share, it does not adequately explore potential trade-offs associated with these strategies. Effective risk management often involves balancing mitigation efforts with other strategic priorities such as innovation and operational efficiency. Future research could benefit from examining these trade-offs to provide a more nuanced understanding of the strategic choices SMEs make in managing risks. Lastly, the study's focus on firm size as a moderator in risk management practices may oversimplify the influence of other critical factors such as industry dynamics, competitive pressures, managerial expertise,

and external market conditions. Future research could enrich the study's findings by incorporating these contextual factors for a more comprehensive analysis of risk management strategies in SMEs.

In conclusion, while each study reviewed contributes valuable insights into risk management practices and SME competitiveness, addressing the identified critiques—such as bias from self-reported data, lack of generalizability, methodological limitations, and oversight of influential external factors—would enhance the robustness and practical relevance of their findings. Future research should consider incorporating mixed-method approaches, exploring broader contextual factors, and employing longitudinal designs to establish stronger causal relationships and provide a deeper understanding of the complexities surrounding risk management practices in SMEs. This comprehensive approach will contribute to advancing both theoretical knowledge and practical implications for enhancing SME competitiveness in diverse and dynamic business environments.

2.6 Summary of Literature Review

The literature on risk management strategies and competitiveness of SMEs in Kenya reveals a multifaceted landscape influenced by various factors. Studies highlight the significant role of effective risk management in enhancing SMEs' competitive advantage, emphasizing strategies such as risk avoidance, transfer, mitigation, and retention. While qualitative approaches provide valuable insights into the implementation and perceived effectiveness of these strategies, concerns regarding generalizability and the need for quantitative validation persist. Moreover, findings underscore the moderating influence of firm size on the relationship between risk management practices and SME performance, suggesting that organizational context and resources play crucial roles. However, gaps remain in understanding how external factors such as regulatory environments, access to finance, and technological adoption interact with internal risk management strategies to shape SME competitiveness. Future research directions can focus on integrating diverse approaches, exploring these broader contextual influences, and employing longitudinal designs to establish robust causal relationships in the Kenyan SME context.

Table 2.1: Summary of Literature Review

Authors' Name and Year	Title of the Study	Methodology Used	Summary of Findings
Kamau (2018)	Risk Management Strategies and Competitiveness of SMEs in Nairobi County, Kenya	Survey Research; Questionnaires	Risk avoidance positively impacts SMEs' market share; larger firms benefit more from risk transfer strategies.
(Mwangi & Wanjiru, 2019)	Effect of Risk Mitigation on Competitiveness of SMEs in Kenya	Case Study; Interviews and Document Analysis	Effective risk mitigation enhances market share; firm size moderates the relationship between risk mitigation and competitiveness
(Johnson & Smith, 2020)	Risk Management Practices and SME Competitiveness	Quantitative analysis of survey data	Found that risk mitigation and risk avoidance significantly enhance SMEs' market share; firm size moderates the effect
(Lee & Kim, 2021)	The Role of Firm Size in Risk Management for SMEs	Qualitative case studies	Demonstrated that risk avoidance is crucial for smaller SMEs, while larger SMEs benefit more from risk mitigation
(Ahmed, Khan, & Ali, 2019)	Impact of Risk Management Strategies on SMEs' Market Share	Mixed-methods (survey and interviews)	Risk transfer and risk retention positively affect market share; larger firms benefit more from risk transfer.
(Brown & Taylor, 2022)	Risk Strategies and SME Market Performance	Longitudinal study	Showed that consistent risk retention improves market share over time, moderated by firm size

Authors' Name and Year	Title of the Study	Methodology Used	Summary of Findings
(Clark & Rivera, Strategic Risk Management in Small Firms, 2019)	Strategic Risk Management in Small Firms	Experimental design	Experimentally showed that risk mitigation strategies are most effective for increasing market share; moderated by firm size.
	Risk Retention and SMEs' Market Performance in Kenya	Survey research; Econometric analysis	Found that risk retention negatively impacts market share in SMEs; moderated by firm size and industry dynamics.
(Wang & Zhao, 2021)	How Risk Management Influences SME Competitiveness	Quantitative analysis of survey data	Identified significant positive relationships between risk management practices and SME competitiveness across industries and regions.

2.7 Research Gaps

The literature on risk management strategies for SMEs reveals several significant gaps that warrant attention in future research. Firstly, many studies predominantly rely on quantitative data from surveys to assess the impact of risk management strategies on SME market share. This approach often overlooks qualitative aspects such as the specific challenges faced by SMEs in implementing these strategies, the organizational culture surrounding risk management, and the subjective perceptions of risk among SME owners and managers (Lee & Kim, 2021; Wooldridge, 2016). Incorporating qualitative methods could offer deeper insights into these nuances, providing a more holistic understanding of how risk management influences SME performance.

Furthermore, the cross-sectional nature of many studies limits their ability to establish causality between risk management strategies and SME competitiveness. While correlations are identified between comprehensive risk management practices and enhanced market share, longitudinal or experimental designs are needed to explore how changes in these strategies over time impact SME performance (Brown & Taylor, 2022). Additionally, the geographical and industry-specific focus of some research restricts the generalizability of findings. Different industries and regions may exhibit varying risk profiles and competitive dynamics, influencing the effectiveness of risk management strategies. Future research should aim to address these contextual differences to provide insights applicable across diverse SME contexts (Otieno & Karanja, 2021; Clark & Rivera, 2019).

Another limitation in current literature is the reliance on market share as the primary measure of SME competitiveness, neglecting other crucial dimensions such as innovation, customer satisfaction, and operational efficiency. Integrating multiple measures of competitiveness would offer a more comprehensive assessment of how risk management strategies contribute to overall SME competitive advantage (Brown & Taylor, 2022). Moreover, while existing studies often apply traditional theoretical frameworks like Markowitz's Portfolio Theory to analyze risk management in SMEs, these frameworks may not fully capture the unique challenges and characteristics of small businesses. Exploring alternative theoretical perspectives or adapting existing

theories could enhance the theoretical foundation of future research in this area (Njoroge, 2020).

Addressing these gaps requires a nuanced approach that considers both internal and external factors influencing risk management practices in SMEs. Lee and Kim (2021) highlight the need for deeper exploration into the mechanisms through which firm size impacts the adoption and effectiveness of risk management strategies. They suggest that factors such as organizational capabilities, managerial expertise, and access to resources play critical roles in shaping how SMEs manage risks. Understanding these dynamics, alongside external influences such as regulatory environments and market conditions, is essential for developing comprehensive frameworks that support SME resilience and growth (Clark & Rivera, 2019).

In summary, future research should strive to incorporate qualitative insights alongside quantitative analyses, employ longitudinal or experimental designs to establish causality, broaden the geographic and sectoral scope of studies, integrate multiple dimensions of competitiveness, and adapt theoretical frameworks to better suit the SME context. By addressing these gaps, researchers can contribute to a more robust understanding of how risk management strategies can be optimized to enhance SME performance in dynamic and challenging business environments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details the study's methodology, including research design, population, sample frame, sampling techniques, data collection instruments and procedures, pilot test, data processing, and analysis. It also describes the techniques used to test the hypotheses outlined in Chapter One.

3.2 Research Philosophy

This study adopted a pragmatic philosophical approach, which is grounded in the historical contributions of the philosophy of pragmatism and embraces a plurality of methods (Kaushik & Walsh, 2019). Pragmatism recognizes that researchers can interpret data through various methods, acknowledging that no single method can provide a complete picture and that multiple realities may exist. According to the pragmatic research philosophy, the research question is the most crucial determinant of the research approach. For this study, the pragmatic approach was chosen due to its flexibility in understanding the paradigm, which in turn determines the methodological approach taken (Morgan, 2014). Moreover, studies employing a pragmatic research philosophy can integrate multiple research methods, including qualitative, quantitative, and action research methods (Creswell & Plano, 2018). Saunders, Lewis and Thornhill (2019) note that “as a philosophy, pragmatism research philosophy accepts concepts to be relevant only if they support action.” Therefore, the pragmatic approach in this study was utilized for the exploratory validation and refinement of risk management strategies typology and SMEs competitiveness. Empirical studies were conducted among SMEs in the Kisumu City in Kenya, and the acceptance of the SME typology was derived from validation through these empirical studies.

3.3 Research Design

Aligned with the philosophical orientation, the study employed a mixed research design with a cross-sectional approach, incorporating both qualitative and quantitative

methods. The research design acts as a roadmap, directing the entire research process. According to Creswell and Creswell (2018), research design encompasses the methods and procedures utilized for data collection and analysis of the variables being investigated. Research design provides the glue that holds a research project together, integrating various elements such as research strategies and data collection methods (Bell, Bryman, & Harley, 2018). The primary purpose of descriptive research is to provide an accurate depiction of facts as they exist.

Mixed research studies not only uncover facts but can also lead to the formulation of significant principles and solutions to important problems (Goundar, 2019). To achieve its objectives, this study adopted a mixed research design with a cross-sectional approach, aiming to accurately depict the influence of risk management strategies on the competitiveness of SMEs in Kenya. This design was appropriate because it sought to answer the question of 'what is' by examining both quantitative and qualitative data for analysis and interpretation. Mixed research design is particularly effective when using questionnaires for data collection, as they offer predetermined response categories that facilitate statistically inferable data (McCombes, 2023).

3.4 Study Population

The study population for this research comprised small and medium-sized enterprises (SMEs) in Kenya registered under the City County of Kisumu. These businesses were selected due to their significant role in the country's economy and the unique challenges they face regarding risk management and competitiveness. The study aimed to include a diverse range of SMEs from various sectors to ensure a comprehensive understanding of the influence of risk management strategies across different industries. Both owners and managers of these SMEs were targeted as respondents, as they are typically responsible for strategic decision-making and are well-versed in the risk management practices employed within their organizations. By focusing on this population, the study sought to gather relevant and practical insights into how effective risk management can enhance the competitive advantage of SMEs in the Kenyan

context. The target population for this study was 16,164 either owner or manager for SME who are in Kisumu County, Kenya. (See Table 3.1).

Table 3.1: Study Population

Target Population category	Study Population
Code 100; General Trade wholesale, retail, and stores	7639
Code 300; Transport, storage, and communication	813
Code 400; Agriculture, forestry, and natural resources	408
Code 500; Accommodation and catering	1599
Code 600; professional and technical services	3558
Code 700; private education, health, and entertainment	751
Code 800; industrial plants, factories, and workshops.	1395
Total	**16,164**

Source: Local authority integrated financial operations management systems business activity code summary City of Kisumu (2018).

3.5 Sample and Sampling Technique

3.5.1 Sampling Frame

In this study, the sampling frame comprised all registered small and medium-sized enterprises (SMEs) Kenya. The sampling frame was crucial as it provided a comprehensive list from which a representative sample could be drawn, ensuring the validity and reliability of the research findings. The sampling frame for this study adopted a list type sampling frame where the respondents were taken from a list of 16,164 SMEs in Kisumu County that pay category permit fee of between Ksh 5,000 and Ksh 200,000 as at December 2018 registered in the Kisumu City County local authority integrated financial operations management systems business activity code summary (Kisumu City County, 2018). A well-defined sampling frame is essential for minimizing sampling bias and enhancing the generalizability of the results (Taherdoost, 2016). By utilizing official business registries and databases maintained by relevant governmental and trade organizations, the study ensured that the sampling frame was up-to-date and inclusive of the diverse range of SMEs operating in Kenya. This approach facilitated the selection of a sample that accurately reflected the population, thereby supporting robust analysis and meaningful conclusions regarding

the influence of risk management strategies on SME competitiveness (Zikmund, Babin, Carr, & Griffin, 2013).

3.5.2 Sample Size and Sampling Techniques

According to Kumar and Singh (2014), an effective sample size must meet the criteria of efficiency, representativeness, reliability, and flexibility for the researcher. In mixed research studies with a cross-sectional approach, determining an appropriate sample size is crucial for ensuring the reliability and validity of the findings. For this study, careful consideration was given to the sample size to balance both quantitative and qualitative data collection methods. The quantitative component required a larger sample to provide statistically significant results, ensure generalizability, and facilitate robust statistical analysis (Creswell & Clark, 2018). In contrast, the qualitative component needed a smaller, more focused sample to gain in-depth insights and explore underlying reasons and motivations behind observed patterns (Marshall, Cardon, Poddar, & Fontenot, 2015). By integrating both components, the study aimed to achieve a comprehensive understanding of the research problem, leveraging the strengths of extensive quantitative data and rich, contextual qualitative data. Determining the right sample size involved considering factors such as the size of the target population, expected variability in responses, and available resources for data collection (Saunders, Lewis, & Thornhill, 2016). A sample, as defined by Nalzaro (2020), is a representative subset of the population under study. Statements made about the sample should accurately reflect the population (Mugo, 2018). Although larger samples typically reduce sampling error (Fraunhoffer, Kim, & Schiereck, 2018), representative samples are often used to infer meaning about the entire population due to the high costs and time constraints of conducting a census. The sample size was adopted from Krejcie and Morgan (1970) sample size table (Appendix iii) developed using the sample size formula for a finite population;

$$s = \chi 2\, NP\,(1-P) \div d\, 2\,(N-1) + \chi 2P\,(1-P).$$

Where;

s = required sample size, N = the population size. χ 2= the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841). P = the population proportion (assumed to be .50 since this would provide the maximum sample size). d = the degree of accuracy expressed as a proportion (.05) =1.96.

S = (1.96)2 *16164*0.5 (1-0.5)

(0.005)2* (16164-1) + (1.96)2*0.5(1-0.5)

= 3.8416*16164*(0.5-0.25) = 3.8416 * 16164*0.25

0.0025*16164+3.8416*(.5-.25) 40.41+3.8416*0.25

= 15523.9056

41.3704

= 375 respondents

The sample size was then chosen proportionately, according to the total SMEs listed in the local authority integrated financial operations management systems business activity code summary City of Kisumu (2018). A simple random sample was then be drawn from each of the stratums as outlined in Table 3.2.

Table 3.2: Sample Size

Target Population category	Study Population	Sample size
Code 100; General Trade wholesale, retail, and stores	7639	177
Code 300; Transport, storage, and communication	813	18
Code 400; Agriculture, forestry, and natural resources	408	10
Code 500; Accommodation and catering	1599	38
Code 600; professional and technical services	3558	83
Code 700; private education, health, and entertainment	751	17
Code 800; industrial plants, factories, and workshops.	1395	32
Total	**16,164**	**375**

Source: Local authority integrated financial operations management systems business activity code summary City of Kisumu (2018).

Stratified random sampling involves dividing the population into distinct subgroups, or strata, based on specific characteristics such as industry sector, size, or geographic location. This method enhances the precision and reliability of the study by ensuring that each subgroup is adequately represented (Etikan & Bala, 2017). Within each stratum, random sampling was then conducted to select participants, thereby minimizing selection bias and ensuring the generalizability of the findings (Taherdoost, 2016). This approach was particularly suitable for examining the influence of risk management strategies on SMEs, as it allowed for a comprehensive analysis across different categories of businesses, providing nuanced insights into the varied impacts of these strategies.

The sample size used in this study was arrived at by using proportional allocation method by Kothari and Garg (2014) and consisted of; 7 homogeneous stratums comprising of 177 SMEs in main activity 100-general trade ,wholesale retail and stores; 19 SMEs in main activity 300-transport ,storage and communication; 10 SMEs in main activity 400-agriculture,forestry and natural resources; 38 SMEs in main activity 500-accommodation and catering; 83 SMEs in main activity 600-professional and technical services; 17 SMEs in main activity 700-private education, health and

entertainment and 32 SMEs in main activity 800-industrial plants ,factories and workshops.

The proportional method used is explained as follows;
Let target population be given by N,

Sample size be n,

n1, n2 and n3 represent sample size per stratum

N1, N2 and N3 represent target sample per stratum

N=375, N1=177, N2=19, N3=10, N4=38, N5=83; N6= 17; N7=32

n1=n*N1/N = 375*177/375=375*0.472=177

N2=375*19/375=375*0.051=18.99

N3=375*10/375=375*0.027=9.99

N4=375*38/375=375*0.101=37.99

N5=375*83/375=375*0.221=82.99

N6=375*17/375=375*0.0453=16.99

N7=375*32/375=375*0.0853=31.99

Additionally, the determination of an appropriate sample size was complemented by meticulous consideration of sampling techniques, ensuring that both quantitative and qualitative data collection methods were effectively employed to achieve a comprehensive understanding of the influence of risk management strategies on the competitiveness of SMEs in Kenya.

3.6 Data Collection Instruments

3.6.1 Instruments

For this study on risk management strategies and the competitiveness of SMEs in Kenya, data collection employed a mix of primary and secondary instruments. Primary data was gathered through structured questionnaires administered to SME owners and managers, focusing on variables such as types of risk management strategies

implemented and their perceived impact on competitiveness. This approach ensured quantitative data collection aligned with the study's mixed research design (McCombes, 2023). Secondary data sources included industry reports, government publications, and scholarly articles, which provided contextual information and statistical data on SME performance and risk management practices in Kenya. These sources were critical for establishing a baseline understanding and complementing the primary data findings (Goundar, 2019).

The questionnaire comprised of both open ended and closed questions. Open ended questions enabled the respondents to express themselves and give more information to the researcher. The closed ended questions offered choices from which the respondents choose from. This gave a faster way of collecting and coding large volumes of data within a short period of time. The questionnaire was developed considering the available literature on the topic of research, research work conducted by other scholars and the research questions which this study sought to determine SMEs mode of operation in Kisumu County, Kenya.

3.6.2 Measurement of Variables

Data collection for this study on the influence of risk management strategies on the competitiveness of SMEs in Kenya employed a mixed research design with a cross-sectional approach. Quantitative data were gathered using structured questionnaires containing closed-ended questions, which provided predefined response options. These questions were designed to measure variables such as types of risk management strategies implemented and perceived competitiveness indicators. The closed-ended format facilitated quantitative analysis, allowing for statistical inference and comparisons across different respondent groups (Cooper & Schindler, 2014). Additionally, qualitative insights were gathered through open-ended questions in the same questionnaire, inviting respondents to provide detailed explanations and examples of their experiences with risk management practices and their perceived impact on competitiveness. This dual approach to data collection enriched the study by capturing both numerical trends and nuanced qualitative perspectives (Smith & Johnson, 2018).

Table 3.5: Operationalization and Measurement of Variables

Variable	Name of variable	Operationalization	Measurement	Measurement scale/adapted from
Dependent variable	Competitiveness	Market share	-Average sales growth -Average revenue growth -Total revenue -Gross/net profits	Close ended questions and 5-point likert scale
	Competitiveness	Customer loyalty	-Customer order delivery -Repeat clients -Rare loss of clients -New product launch	5-point likert scale
Moderating variable	Firm size	No of employees	-Employees in company -branch /outlets	Close ended questions
	Firm size	Capital Base	-Capital base -Annual financial turnover	Close ended questions
Independent variable	Risk avoidance	Attitude change towards others	-Training in risk assessment -Training on risk analysis -Training on risk avoidance -Use of available resources -Credit policy documentation	Close ended questions and 5-point likert scale
	Risk avoidance	-Market Avoidance	-Investment pull out -New market entry delay -Focus on less risky geographies -Avoidance of some suppliers	Close ended questions and 5-point likert scale;
Independent variable	Risk transfer	Outsourcing	-Types of insurance -Investment in insurance -Portfolio risk assessment -Outsourced services	Close ended questions and 5-point likert scale;

Variable	Name of variable	Operationalization	Measurement	Measurement scale/adapted from
	Risk transfer	Contracting	-Outsourced functions -Contracted operations -Risk profiling -Membership to associations	Close ended questions and 5-point likert scale;
Independent variable	Risk retention	Financing	-Conduct market research -Collateral for credit -Realistic budget operation -Reserve funds	Close ended questions and 5-point likert scale;
	Risk retention	Capacity Development	-Invest in research and development -Continuous training and development -Frequent situational analysis -New product innovation -License to operate	Close ended questions and 5-point likert scale;
Independent variable	Risk mitigation	Technological adoption	-Proper risk intervention plans -Implementation of audits -Collaboration with others -Reduced exploitation/cost/risk	Close ended questions and 5-point likert scale
	Risk mitigation	Management Involvement	-top management views -Coordinated internal systems -Number of mergers/collaborations -Number of audits -Mergers with suppliers -Cultivation of trust and good relations	Close ended questions and 5-point likert scale

3.6.3 Control of Common Method Biases

Though the validity construct for all variables in the study was tested, the analysis for the study was indisputably influenced partially by the common method bias. This exist if some common variation between any two concepts does become a function of common measurement and/or source used to gather the data (Mukanzi et al., 2014; Meier & O'Toole 2013). It gives yield to systematic measurement errors which may inflate the relationships between variables (Eshiteti, 2019; Ashikali & Groeneveld, 2015). By so doing, such errors in measurement tend to threaten the validity of the conclusions made about the relationships between the different measures.

Thus, common method biases can be very problematic since they form the main sources of errors in measurements. Widely, measurement errors are recognized as having both a random and systematic component (Podsakoff *et al.,* 2003). One of the main sources of systematic measurement errors is the method variance which arises out of a variety of sources of data (Bagozzi & Yi, 1991). This means that the common method variance would occur when the measures of both the predictor and criterion variables are obtained from the same rater or source (Podsakoff *et al.,* 2003). In this regard, risk management practices (explanatory variables) in SMEs, firm size (moderator) and competitiveness of SMEs (dependent variable) were all measured by perceptions of respondents in one questionnaire.

However, to avoid common method biases, this study collected the measures of variables from different sources. The advantage of this procedure is that it makes it impossible for the mind-set of the source or the one rating to show bias over some relationship between the explanatory and criterion variable. This eliminates the effects of consistency motifs, implicit theories, social desirability tendencies, dis-positional and transient mood states and any tendencies on the part of the rater to acquiesce or respond in a lenient manner. This study also obtained data from anonymous respondents although they were assured that there were no right or wrong answers but they should answer the questions as honestly as possible.

3.7 Data Collection Procedure

A research authorization letter from Jomo Kenyatta University of Agriculture and Technology was submitted to the National Commission for Science, Technology, and Innovation (NACOSTI) to facilitate the data collection process. Each questionnaire included a cover letter explaining the research purpose to the respondents. The importance of answering all questions was highlighted, and confidentiality was assured.

Data collection commenced with the aid of seven research assistants due to the large sample size. The researcher and assistants administered the questionnaires to owners and managers in seven sub-counties of Kisumu City. This approach aimed to boost the response rate and provide clarity on any questions requiring further explanation. To minimize disruption to work schedules, a drop-and-pick method was used for respondents, with questionnaires collected three days later. Schedules. The questionnaires were then picked after three days from this stratum.

3.8 Pilot Test

According to Cooper and Schindler (2023), conducting a pilot test is essential for identifying flaws in the research instrument and providing preliminary data for selecting a probability sample. The pilot study should involve subjects from the intended population and replicate the procedures and protocols planned for the main data collection. This study conducted a pilot test before the primary data collection to assess the adequacy of the sampling frame, the effectiveness of the questionnaire, and the efficiency of interviewer instructions. Saunders, Lewis and Thornhill (2019) highlight that pilot testing enhances questionnaire clarity, helping respondents understand and answer questions more easily. It also offers insights into the content validity of the questionnaire, determining whether it makes sense and would be effective.

Cooper and Schindler (2023) recommend a pilot sample size of 25-100 subjects for greater accuracy. In this study, 40 owners or manager from 40 SMEs located in Nairobi City County participated in the pilot test. Participants from the pilot study were

excluded from the main study, as the pilot identified weaknesses in the questionnaire that were subsequently addressed before its use in the main study.

3.8.1 Reliability Test of the Research Instrument

Reliability refers to the ability of a research instrument to measure accurately with consistent results. It is the degree to which there is an absence of measurement errors (Burns & Burns, 2016). To ensure the reliability of the study, a pilot study was carried out followed by the computation of Cronbach's alpha coefficient for each variable. Cronbach's alpha is the average of all possible split-half coefficients resulting from different ways of splitting the scale items (Malhotra & Dash, 2015). The alpha coefficient (α) ranges in value from 0 to 1 and is used to describe the reliability of factors extracted from dichotomous or multi-point formatted questionnaires or scales (e.g., rating scale: 1 = poor, 5 = excellent). Reliability was assessed using Cronbach's alpha test via the reliability command in SPSS.

Cronbach's alpha is a more general form of the Kuder-Richardson Formula 20 used to assess internal consistency based on split-half reliabilities (DeVellis, 2016). In this study, reliability analysis ensured that the measures of variables had internal consistency across all items measuring the same concept or variable (Akande, Olaleye, & Oguntimehin, 2019). A construct composite reliability coefficient (Cronbach alpha) was used to determine reliability. According to Jasper (2015), Cronbach's alpha below 0.5 indicates unreliability of variables and cannot be used to draw conclusions. A Cronbach's alpha of 0.7 or higher was considered adequate for this study. Cronbach's alpha is preferred over Kuder and Richardson Formula 20 as it can handle continuous and non-dichotomous data (Souza, Alexandre, & Guirardello, 2017). The study instrument demonstrated reliability and high internal consistency with an alpha coefficient of 0.70 or higher for each study objective.

3.8.2 Validity Test

Validity refers to the degree to which the research instrument measures correctly what it ought to measure. Validity is concerned with whether the findings are about what they appear to be about (Bajpai & Bajpai, 2014). Content validity should be established

prior to any theoretical testing (Taherdoost, 2016). Factor analysis was performed for testing the validity of the measures. During the pilot study, both the researcher and the research assistants were jointly involved in administering the research instrument and in clarifying all unclear issues emerging from the research instrument. Before printing the final questionnaire, all the issues raised during the pilot study were addressed through the supervisor's guidance so as to retain the original intention of the research instrument. Factor analysis with varimax rotation was calculated to determine construct validity to ascertain the validity of the test instrument (questionnaire). Factor analysis was used to mathematically test the validity of the Likert Scales used.

The aim of factor analysis was to identify the test items which belong together and seem to say the same thing. The advantage of which is to ensure that the finding conclusions are focused. The criterion for element inclusion is that only those which have factor loadings of 0.50 and above are considered (Ogunnaike & Oyewunmi, 2020). In the current study, all the measures are selected based on the existing scales for which validity will already be established. Construct validity assesses what the construct or scale is in fact measuring.

3.9 Data Analysis and Presentation

This section discusses the techniques used to analyse data and test the variables. The questionnaires were then checked for completeness and consistency. The data was then coded to classify responses into meaningful categories for analysis. The coded data were then entered into SPPS version 20 software, which was then used to generate tables, graphs and statistical parameter estimates. The collected data was then analyzed using descriptive and inferential statistics. Descriptive statistics of the variables included percentages, mean, median, mode and standard deviations. frequencies and percentages) to summarize the demographic information of respondents. The results were presented in charts and tables. Similarly, percentages were used to analyse and present the various responses to statements that helped the study to measure the specific variables. Further, means and standard deviations were also used to analyze and present the responses of the statements on the likert scale. Inferential statistics used were (correlation and regression analysis) were used to test for the five

hypotheses. Both linear regression and multiple regression were used to explain the amount of influence that occurred on the predicted variable (competitiveness of SMEs) because of the change in risk management strategies used. In addition, content analysis was used to present the open-ended questions. Summarized demographic information of the respondents was presented in tables and charts.

3.9.1 Correlation Analysis

To determine the strength and direction of the relationship between risk management strategies and competitiveness of SMEs in Kisumu County, a correlation analysis was conducted. It helped assess the extent to which risk management strategies were linearly related to competitiveness of SMEs in Kisumu County. Thus, correlation analysis can measure the magnitude and direction of the relationship between two specific variables(Aryal, 2021). A negative correlation coefficient indicates that an inverse relationship exists between the independent and the dependent variables. On the other hand, a positive coefficient of correlation shows that the relationship between the two variables is of a direct nature (Creswell & Poth, 2018). After the correlation analysis was done, linear, multiple, the hierarchical and stepwise regressions were conducted in succession. Furthermore, interaction plots were also drawn indicate the level of relationship when the level of the moderating variable was high and when it was low.

3.9.2 Statistical Measurement Model

To establish the strength of association between risk management strategies and the competitiveness of SMEs in Kisumu County, linear and multiple regression analyses were used. Additionally, hierarchical and stepwise regressions were conducted to test the moderating influence of firm size on the relationship between risk management strategies and SME competitiveness. In both regressions, competitiveness (the dependent variable) was kept in its raw form, while risk management strategies (the independent variable) and firm size (the moderating variable) were standardized. Standardizing these variables before conducting hierarchical and stepwise regressions reduces the risk of multicollinearity (Nakpodia & Asaleye, 2020).

In the first step, the three demographic variables of gender, length of trading, and education level were entered into the regression model as control variables. Controlling for these variables is important because they have been found to influence certain outcomes (Kothari & Garg, 2014). Next, the standardized predictors and the moderating variable were multiplied to create interaction terms. Multiple regression analyses were then performed by entering these variables into SPSS as blocks to generate various models. Selected control variables (age, level of education, and length of service) were entered first. Subsequently, interaction plots showing the relationships at high and low moderation levels were generated using the process model by Andrew Hayes.

Two multiple regression models were used to investigate the influence of firm size on the relationship between risk management strategies and competitiveness. The first model tested the direct relationship between risk management strategies and the competitiveness of SMEs. The second model investigated whether firm size has a significant moderating influence on this relationship. If the cross-product interaction term has a significant regression parameter, it indicates that the moderating variable significantly affects the relationship between the predictor variable and the criterion variable (Hayes, 2014).

These models are shown in equations I and II.

$$Y = \alpha + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + \mu \quad \text{(I)}$$

When the moderating variable (firm size) was multiplied through equation (I), equation (II) was given as shown:

$$Y = \alpha + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + ZX_1\beta_6 + ZX_2\beta_7 + ZX_3\beta_8 + ZX_4\beta_9 + \mu \quad \text{(II)}$$

Where $\boldsymbol{\gamma}$= Dependent variable [Competitiveness of SMEs]

$\boldsymbol{\alpha}$=Constant i.e., the y intercept or the average response when both predictor variables are 0

$\mathbf{x_1}$= Independent variable 1 [Risk Avoidance strategy]

$\mathbf{x_2}$= Independent variable 2 [Risk transfer strategy]

$\mathbf{x_3}$= Independent variable 3 [Risk retention strategy]

x4= Independent variable 4 [Risk mitigation strategy]

Z= Firm Size as Moderator

ε=Random Component/standard error

$\boldsymbol{\beta_1}$ **-**$\boldsymbol{\beta_9}$**=**Regression Coefficients.

3.9.2.1 Specific Analysis Models

Risk Avoidance and Competitiveness: This model assesses the influence of risk avoidance on competitiveness.

$$\text{Competitiveness}=\alpha+\beta 1(\text{Risk Avoidance})+\epsilon$$

Where:

α = Constant term

$\beta 1$ = Unstandardized coefficient for Risk Avoidance

ϵ = Error term

Risk Transfer and Competitiveness: This model evaluates the effect of risk transfer on competitiveness.

$$\text{Competitiveness}=\alpha+\beta 2(\text{Risk Transfer})+\epsilon$$

Where:

α = Constant term

$\beta 2$ = Unstandardized coefficient for Risk Transfer

ϵ = Error term

Risk Retention and Competitiveness: This model measures the impact of risk retention on competitiveness.

$$Competitiveness = \alpha + \beta 3(Risk\ Retention) + \epsilon$$

Where:

$\beta 3$ = Unstandardized coefficient for Risk Retention

α = Constant term

ϵ = Error term

Risk Mitigation and Competitiveness: This model explores how risk mitigation affects competitiveness.

$$Competitiveness = \alpha + \beta 4(Risk\ Mitigation) + \epsilon$$

Where:

α = Constant term

$\beta 4$ = Unstandardized coefficient for Risk Mitigation

ϵ = Error term

Combined Model for All Risk Management Strategies: For a model incorporating all four risk management strategies simultaneously:

$$Competitiveness = \alpha + \beta 1(Risk\ Avoidance) + \beta 2(Risk\ Transfer) + \beta 3(Risk\ Retention) + \beta 4(Risk\ Mitigation) + \epsilon$$

Where:

α = Constant term

$\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$ = Unstandardized coefficients for Risk Avoidance, Risk Transfer, Risk Retention, and Risk Mitigation, respectively

ϵ = Error term

3.9 3 Test of Assumptions

The analysis of linear regression is augured on five assumptions which indicate whether the estimation techniques in linear regression analysis has the desired characteristics and whether the testing of hypotheses that concern the coefficient estimates can be validly carried out (Hair, Babin, Anderson, & Tatham, 2019). In the context of this study, the diagnostic test of the research instrument was crucial to ensure the reliability and validity of the data collected. Therefore, this study conducted the diagnostic tests of the five assumptions as described herein;

a) Test for Normality- Kolmogorov-Smirnov Test

Testing for normality determines whether the obtained data can properly be modelled by a normal distribution or not (Moore & McCabe, 2014). To achieve this, one can construct histograms, or Q-Q plots. On the other hand, the normal distribution of data can also be checked by numerical tests for normality which include, the Kolmogorov-Smirnov test and Shapiro-Wilk test. Nonetheless, Kolmogorov-Smirnov test remains to be the most appropriate, especially, when dealing with a relatively large sample size that ranges between 50-2000 items (Wambui, 2015). If the significant value of the Kolmogorov-Smirnov Test is greater than 0.05 (>0.05), then it means that the data set is normal. But if the significant value is less than 0.05 (<0.05), then the data set is said to be in a significant deviation from a normal distribution (Kumar , 2015). Therefore, this study used the Kolmogorov-Smirnov Test and the Q-Q Plots to test for normality.

b) Test for Linearity-ANOVA Test

Linearity is the property of a mathematical relationship or function which means that it can be graphically represented as a straight line also referred to as the goodness of fit line .Linearity determines the existence or the nonexistence of a linear relationship between each independent variable and the dependent variable used in a research study (Zikmund, Babin, Carr, & Griffin, 2013). In research, it refers to the degree to which a dependent variable has a linear relationship with one or more independent variables. This means that the expected value of dependent variable is a straight-line function of each independent variable, holding the others constant.

To test linearity, scatter plots for each independent variable against the dependent were plotted. Similarly, an ANOVA output table for the linear and nonlinear components of any pair of variables was computed using the SPSS version 22.0 with decision level that if value Sig. deviation from linearity is >0.05, then the relationship between the independent variables with the dependent variable is linearly dependent. If otherwise, then the relationship between the independent variables with the dependent variable is nonlinear.

This test is a requirement for both correlation and linear regression analysis. The test was carried out by use of 'the value significant deviation from linearity' method. For the rule of thumb, the value sig. deviation from linearity that is greater than 0.05, indicates a linear relationship between the predictor and the predicted variables and the converse is also true.

c) Test for Multicollinearity

Multicollinearity implies that the independent variables are very strongly correlated, such that it becomes very difficult to determine the actual contribution of each independent variable to the variance in the predicted variable (Oladipupo & Afolabi, 2016). The multicollinearity test was carried out by use of the Variance Inflation Factor (VIF) was carried out to test the degree of possible multicollinearity of the independent variables in the regression model. The VIF and the tolerance statistics indicate whether a predictor has a strong linear relationship with the other predictor(s) (Field, 2013). For the VIF, a value 1-10 indicates the absence of multicollinearity. If the value is greater than 10, then there is multicollinearity that may be biasing the regression model. The tolerance statistics was also computed as the reciprocal of the VIF. For the assumption to hold the VIF statistic should be VIF <10.

d) Test for Heteroscedasticity

Heteroscedasticity is the variation in the error around the regression line Wooldridge (2016). This implies that, such a variance isn't identical for all independent variables in the study. Furthermore, it also means that the errors of the regression model are not

distributed identically (Greene, 2018). This study used the P-P Plots as well as the white test to establish whether the data was homoscedastic or heteroscedastic.

e) Test of Autocorrelation -Durbin Watson Test

According to Wooldridge (2016) , autocorrelation is the correlation between members of a series of observations duly arranged based on time and space. It implies that the variable observations are independent of each other (Gujarati & Porter, 2015). To detect its presence or absence, the Durbin-Watson test was used. Accordingly, the Durbin-Watson statistic varies from 0 to 4. A value closer to 4 indicates the existence of negative autocorrelation (Saunders, Lewis, & Thornhill, 2019; Kothari, 2014; Tavakol & Dennick, 2011). A linear regression analysis requires that there is little or no autocorrelation in the data. As a rule of thumb, values of $1.5 < d < 2.5$ show that there is no autocorrelation in the data.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents and discusses the results based on the objectives and hypotheses of the study as formulated in chapter one. The discussion is organized based on the objectives of the study. The chapter is organized into various sections. First, it evaluates the response rate, reliability, and validity of the survey constructs. Secondly, it collates the general background information of the respondents and descriptive analysis of the study variables. Finally, the chapter reviews the results of statistical analysis to test the research hypotheses as well as presenting discussions of the results and implications arising from the findings.

4.2 Pilot Testing Results

The pilot study was conducted on 40 respondents from Nairobi City County. This is because Nairobi being a city has diversified portfolio of SMEs paying trading licenses and registered at Nairobi County the same way Kisumu County has a list of SMEs paying trading licenses and registered at the Kisumu City County register. The pilot was done to pretest the instrument of data collection. The data piloted accounted for study 10.6% of the target sample. According to Hair, Black, Babin and Anderson (2018) study indicate that, between 5% to 10% of the targeted sample is adequate for the pilot test, and hence, help in establishing the reliability of the instrument of data collection. The respondents for the pilot study were picked randomly by use of random numbers to ensure equal chances for each respondent in being included into the study (Kothari & Garg, 2014). The pilot sample was representative as compared with the overall target population of interest, with the two main strata of interest.

4.2.1 Reliability Results

Before conducting any analysis, the data was measured for internal consistency (reliability) using Cronbach's alpha. The Cronbach's alpha is used when there are multiple Likert questions in a survey or questionnaire is used as the data collection tool

as was the case for this study. The reliability of obtained data is the extent to which the data collection instruments give consistent results after repeated trials (Mugenda & Mugenda, 2015). Hajjar (2018) opine that, reliability coefficient tends to estimate the consistency of the instrument by determining if each item on the test can relate to all the other items. To test the reliability (or internal consistency) of the obtained data, the Cronbach Alpha (α) coefficient was used. That is, risk avoidance strategy, risk transfer strategy, risk retention strategy, and risk mitigation strategy, the moderating variable (firm size) and the competitiveness of SMEs (predicted variable) were all tested for reliability by use of the Cronbach alpha test which gave results as shown in Table 4.1.

Risk avoidance strategy construct was measured using seven questionnaire items anchored on a likert scale of five points. The standardized Cronbach alpha examined gave a coefficient of 0.7130.

Risk transfer strategy as the second construct for the study was measured by seven questionnaire items, which were based on a five point's likert scale. The standardized Cronbach alpha examined gave a coefficient of 0.8360.

Risk retention strategy like the other two, this construct was measured by seven questionnaire items that were equally based on a five-point likert scale. All items of this construct gave a Cronbach Alpha coefficient of 0.8167.

The fourth construct was **risk mitigation strategy**. This construct was measured by eight (8) questionnaire items. The standardized Cronbach Alpha coefficient for the composite variable was given at 0.9831, being the highest coefficient in the study.

On the other hand, **firm size** was measured using two sub variables of number of employees and the flexibility in decision making. It had a total of five closed ended questionnaire items, and not measured on a five-point likert scale.

Finally, **Competitiveness** as the dependent variable was measured by use of three sub constructs of market share, revenue and net profit margin, with a total of five (5) questionnaire items. The Cronbach alpha coefficient examined for these items gave a

value of 0.7660. A summary of the measurements with their Cronbach statistics are presented in Table 4.1 as shown:

Table 4.1: Reliability Coefficient of the Study Variable

Variable	Number of Items	Cronbach's Alpha's	Remarks
Risk Avoidance	7	0.7130	Reliable
Risk Transfer	7	0.8360	Reliable
Risk Retention	7	0.8167	Reliable
Risk Mitigation	8	0.9381	Reliable
Competitiveness	5	0.7662	Reliable

According to DeVellis (2016) commonly accepted threshold is 0.70 or higher, ndicating acceptable internal consistency reliability. This means that if the items in a scale or questionnaire are highly correlated with each other, they are measuring the same construct. Thus, basing on the standardized Cronbach alpha coefficient values (Table 4.2) for all the variables in this research study, it was established that the questionnaire used was reliable. This is alluded to the fact that all the questionnaire items for all the variables gave a composite Cronbach alpha of 0.7130 for risk avoidance, 0.8360 for risk transfer, 0.8167 for risk retention, 0.9381 risk mitigation, and 0.7662 for competitiveness, all of which were above the minimum acceptable 0.7 Cronbach Alpha coefficient value.

4.2.2 Test of Validity by Factor Analysis

Construct validity of the data collection instrument used was tested by carrying out factor analysis. Factor analysis helps in data reduction, reducing a large number of constructs to a smaller set of certain underlying factors which summarizes the essential information in a research study (Hajjar, 2018). Before these factors were extracted, the suitability of the data set for the factor analysis was assessed by use of the Kaiser-Meyer-Oklin Measure of Sampling Adequacy and the Bartlett's Test of Sphericity. According to Kaiser (1974), the KMO Measure of Sampling Adequacy is between an index of 0 and 1. Hair, Babin, Anderson and Tatham (2019) states that the threshold's KMO's measure is 0.6 and the closer this index value move to 1 the better. On the other hand, Bartlett's Test of Sphericity relates to the significance of the research

study. It shows the validity of responses obtained with regard to the research problem. Shrestha (2021) pointed out that the Bartlett's test of sphericity is used to test the hypothesis that variables in the correlation matrix are not correlated. According to Tabachnick and Fidell (2013) the recommended test statistic should be less than 0.05. Similarly, prior to carrying out factor analysis, communalities were checked to establish whether the minimum criteria is met or not. Communalities do represent the proportion of variance in original variables which can be accounted for, by checking the factor solution. This factor solution should explain at least half of each of original variable's variance. Thus, the communality value for each variable should be greater or equal to 0.50.

a) Factor analysis for risk avoidance

Factor analysis was conducted for the construct of risk avoidance and requested that all the factor loading of less than 0.5 be suppressed in the output result, and hence, providing blank spaces for some of the loadings. The results in Table 4.2 indicate the factor loading and analysis for risk avoidance strategy. From the findings, all values for all factors were greater than 0.5 showing the acceptable value for factor loading on component 1. Each of the extracted factor has Eigen value that is greater than 1 which account for a different percentage of variance to the squared loadings. The probability associated with the Bartlett's test is less than 0.001 which satisfies the requirement of having less than the significance level.

Table 4.2: Factor Analysis for Risk Avoidance

Rotated Component Matrix[a]		
	Component	
	1	2
My business often delays entering new markets.	.729	
My business mostly focuses on less risky geographies.	.760	
My business often has strict documentation policies for creditors	.638	
Employees in my company are fully trained on risk avoidance	.778	
My business often uses available company resources to meet customer demands.	.641	
My organization often depends on its resources for organizations temporary needs.	.722	
My organization often avoids working with some suppliers	.724	
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	1107.691
	df	45
	Sig.	.000

b) Factor analysis for risk transfer strategy

To explain the underlying dimensions and reduce data of the risk transfer dimensions, a factor analysis was performed for this study. It was carried out to confirm the constructs underlying the data. Before the test was done for each scale, three conditions were ascertained to ensure they were not violated. First, the sample adequacy was required and hence, each scale's sample adequacy was tested using Kaiser-Meyer-Olkin (KMO) measure. Accordingly, values > 0.6 are considered to be adequate for a good factor analysis, therefore, all scales satisfied the KMO threshold. Finally, the Bartlett's test of sphericity was used to test the hypothesis that the correlation matrix value is zero, indicating that their existed a correlation between variables. It was done through the conversion of the determinant of the matrix of the sum of products and cross products into a chi square statistic and then tested for its significance.

Accordingly, a p-value < 0.05 indicates that there exists a correlation and therefore, satisfying the conditions required for factorability. All the seven amalgamated scales were subsequently subjected to exploratory factor analysis using Principal Components Method (PCM) and then rotated using Varimax rotation with Kaiser Normalization method. Only components with Eigen values ≥ 1 were extracted and items with loading ≥ 0.5 represented substantive values as shown in Table 4.3.

Table 4.3: Factor Analysis for Risk Transfer Strategy

Rotated Component Matrix[a]

	Component	
	1	**2**
My company has developed a reliable risk profiling method to facilitate hazard control.		.707
My company often invests in insurance to mitigate against losses.		.666
My company outsources most business functions		.556
Most of operations are contracted		.818
My business frequently conducts portfolio risk assessment.	.739	
My company is a member of various associations to deal with any business losses	.843	
My company often involve management in decision making pertaining the company.	.701	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.881
Bartlett's Test of Sphericity	Approx. Chi-Square	1351.474
	df	45
	Sig.	.000

c) Factor analysis for risk retention strategy

Furthermore, the scales for risk retention construct were subjected to factor analysis. Table 4.4 shows the output for the factor loading of the questionnaire items on risk retention. The findings revealed that all the factor loading were less than 0.5, indicating the acceptable value for factor analysis. From the findings, all values for all factors were greater than 0.5 showing the acceptable value for factor loading on both

component 1 and component 2. Accordingly, any item that fails to meet the criteria of having a factor loading value greater than 0.5 and loads only on one factor is dropped from the study (Taherdoost, 2016).Each of the extracted factor has Eigen value that is greater than 1 which account for a different percentage of variance to the squared loadings. The probability associated with the Bartlett's test is less than 0.001 which satisfies the requirement of having less than the significance level. Table 4.4 shows the factor loading for each item which are sorted by size.

Table 4.4: Factor Analysis for Risk Retention Strategy

Rotated Component Matrix[a]		
	Component	
	1	2
My firm uses collateral to get credit	.868	
The company has adopted employee continuous training & development as a retention strategy	.688	
My company frequently conducts situational analysis to understand market trends	.724	
My company always operate with a realistic budget		.486
My firm has capacity to innovate new products.	.637	
My firm has reserve funds for unexpected happenings.		.564
My firm often acquires relevant licenses to operate		.641
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.783
Bartlett's Test of Sphericity	Approx. Chi-Square	756.719
	df	36
	Sig.	.000

d) Factor analysis for risk mitigation strategy

The results of the PCM analysis for risk mitigation (Table 4.5) indicates that 8 items were sorted and clustered into two components. The results further showed that the two factors had Eigenvalues that exceeded 1.0. The Eigenvalue of a factor represents the amount of the total variance explained by that factor. Usually, varimax rotation is considered the best method of creating more interpretable clusters of factors. This is

because varimax rotation attempts to maximize the dispersion of loadings between factors. Further, varimax is said to be good for simple factor analysis since it is known to be a good general approach that simplifies the interpretation of factors(Verma, 2013). On the basis of this argument, varimax rotation was chosen. Table 4.5 shows the rotated component matrix by using principal component analysis with varimax rotation. The risk mitigation strategy items (8) were suppressed at 0.5

Table 4.5: Factor Analysis for Risk Mitigation Strategy

Rotated Component Matrix[a]		
	Component	
	1	**2**
Collaboration/mergers between businesses suppliers and customers has reduced middlemen exploitation		.773
My organization has fully implemented an audit system to ensure efficiency of the resources.		.878
My firm has collaborated with other business entities to promote technology development		.670
Management's opinion on risk mitigation is often sought.		
The company has acquired specialized software used to assess risk and guide in mitigating the same.	.827	
My company often prepares risk intervention plans.	.687	
My company has a well-coordinated internal system.	.781	
My company often collaborates with its suppliers.	.780	
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	850.983
	df	28
	Sig.	.000

e) Factor analysis for competitiveness

Similarly, the scales for the dependent variable (competitiveness) were also subjected to factor analysis. Table 4.6 shows the output for the factor loading of the questionnaire items on competitiveness. The findings revealed that all the factor loading were less than 0.5, which indicates the acceptable value for factor analysis. From the findings, all values for all factors were greater than 0.5 showing the acceptable value for factor loading on both component 1 and component 2. Accordingly, any item that fails to

meet the criteria of having a factor loading value greater than 0.5 and loads only on one factor is dropped from the study (Tabachnick & Fidell, 2013). Each of the extracted factor has Eigen value that is greater than 1 which account for a different percentage of variance to the squared loadings. The probability associated with the Bartlett's test is less than 0.001

Table 4.6: Factor Analysis for Competitiveness

Rotated Component Matrix[a]		
	Component	
	1	**2**
We always deliver customer orders without delay	.795	
Most of our customers are repeat clients	.898	
We rarely lose our clients to our competitors	.791	
My company is often updating its systems to meet customer demands.	.835	
Compared to its competitors, my company is always ahead in new products launches.	.827	
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.841
Bartlett's Test of Sphericity	Approx. Chi-Square	1380.083
	df	45
	Sig.	.000

4.3 Response Rate

The response rate can be defined as the extent to which the final data includes all the sample questions to be calculated, the number of people with whom the items of the interview completed and divide the total number of people in the entire sample (Mukanzi, Gachunga, Ngungi, & Kihoro, 2014). According to Frey (2018) response rate is the ratio of the number of participants in a study to the number of participants who were asked to participate. A total of 375 questionnaires were distributed and administered to owners or managers working for the SMEs within Kisumu County drawn from 7 population categories as shown in Table 4.1. Out of the 375 questionnaires that were distributed, 293 questionnaires were successfully returned giving a response rate of 78.1 per cent. According to Doss, Rayfield, Burris and

Lawver (2021) only 100 responses for a survey type of research can be quite sufficient as a response rate. However, Mugenda and Mugenda (2015) opined that, 50 per cent of the response rate is very adequate for surveys study. They further pointed out that 60 per cent response rate is good and a response rate above 70 per cent is very good. Furthermore, (Gils-Schmid (2021) suggested that a response rate of 50% or higher is acceptable in most circumstances, while any response rate above 70% is considered excellent. However, the respondent's characteristics that were measured in this study included; gender, age, education level and legal structure of their firms. Table 4.1 shows that the study achieved 78.1 per cent response rate. A response rate of 78.1% means that data was collected from more than half of the targeted participants. This response rate was above the 50% mark which according to Gils-Schmid (2021) should be met to ensure data adequacy for analysis and reporting.

Table 4.7: Response Rate

Target Population category	**Target Population**	**Sample size(No of Distributed questionnaires)**	**Response (Returned Questionnaires)**	**% Response**
General Trade wholesale, retail, and stores	7639	177	122	32.5%
Transport, storage, and communication	813	18	15	4%
Agriculture, forestry, and natural resources	408	10	8	2.1%
Accommodation and catering	1599	38	30	8%
Professional and technical services	3558	83	78	20.8%
Private education, health, and entertainment	751	17	10	2.6%
Industrial plants, factories, and workshops.	1395	32	30	8%
Total	**16,164**	**375**	**293**	**78%**

4.4 Demographic Information

Every target population has its own characteristics (Mukanzi, Gachunga, Ngungi & Kihoro, 2014). Therefore, the respondents were requested to indicate certain characteristics that concerns them. These characteristics included their sub county of residence, gender, their level of education among other things. The results were obtained through descriptive statistics of the percentages, frequencies and means and then presented in tables, charts and graphs. The scope of the respondents entailed SMEs within the 7 subcounties in Kisumu County in Kenya.This data was drawn from the Kisumu city county register (2018).

Seeking demographics of respondents in research is important because it helps to understand the characteristics of the population being studied, and to assess the representativeness of the sample. Demographic information such as age, gender, education, occupation, and income can provide insights into how different groups of people respond to research questions and help to identify any potential biases or limitations in the study (Hair , Black, Babin & Anderson, 2016).

4.4.1 Gender Distribution

The study sought to establish the distribution of respondents in terms of gender. Owners and those in management positions of the various SMEs were also included in the survey. The results obtained and shown in Figure 4.1revealed that a majority of respondents were male (58%). Female respondents accounted for 42%.

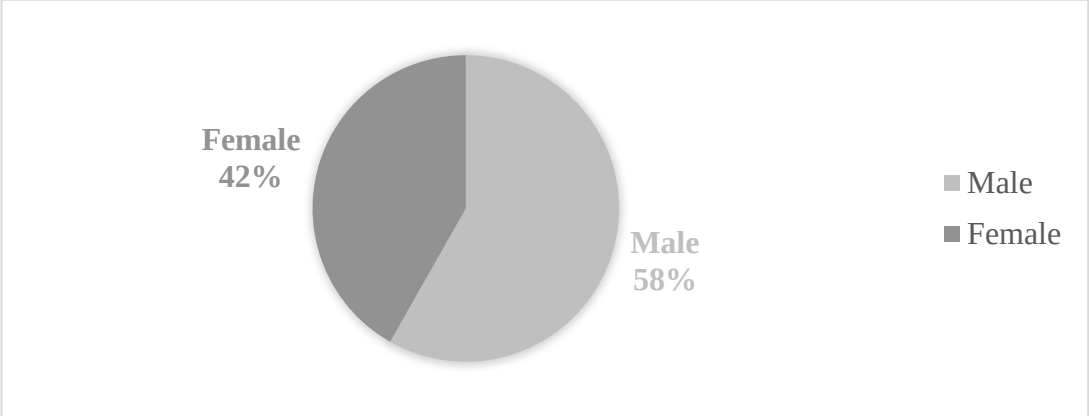

Figure 4.1: Gender of the Respondents

Thus, the SMEs operating within Kisumu City County are operated by both genders and hence there was need to understand this mix from the sample used in the study. This helps in drawing different opinion mindset of the businesses as viewed by both genders who trade within the County. Figure 4.1 shows that majority [58%] of the respondents were male. Forty two percent of the respondents were female. This reflects male dominance in the sector. For this study, gender segregation was sought to ensure that the sample is representative of the population being studied. Sandelowski, Voils, and Knafl (2015) states that the population is equally split between male and females, then the sample should also reflect this split to avoid any bias in the results. Further, collecting data on gender distribution is an ethical consideration as it ensures that research does not discriminate or exclude any group based on their gender. This can help to ensure that the research in an unbiased and fair manner.

4.4.2 Level of Education

This research study sought to establish the education level of the respondents. The findings in Figure 4.2 indicate that a majority of the respondents (37%) were university graduates. Those with tertiary college education closely followed in at 36.7%. Similarly, 16.7% of the respondents had only secondary or Ordinary level of education, with another 5.7 % indicated that they only had primary level of education. On the other hand, 2.5% of the respondents were said to have post graduate level of education. Further, the findings revealed that 1.4 % of SMEs within Kisumu County

were being operated by those who had no formal education at all. The results are as shown in Figure 4.2.

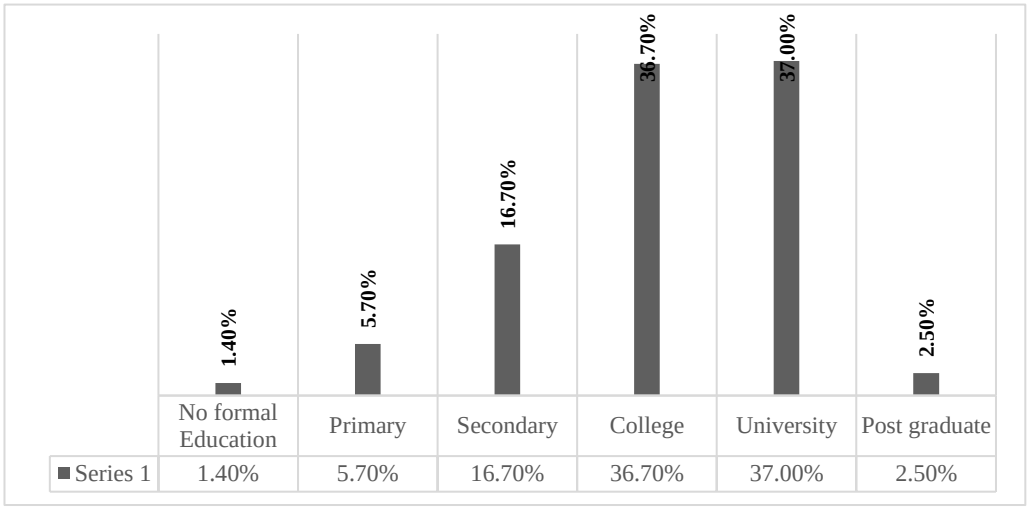

Figure 4.2: Respondent's Level of Education

Thus, based on the findings in Figure 4.2, the business environment is operated by diversified skilled personnel/individuals to choose from. Employees can be employed for their academic qualifications or for their knowledge regarding the task they will be assigned to. Also, certain qualifications may drive one to begin and operate a certain type of business for instance pharmaceuticals, schools and other business requires various professional certifications to operate them in Kenya. Understanding the education background of the participants and their potential knowledge in the area being studied. This can help in the interpretation the data and provide insight into the perspective of the participants (Kothari , 2015).

4.4.3 Age of the Study Sampled Firms

The study also sought to establish the age distribution amongst the firms within the selected SMEs in Kisumu County. The results in Figure 4.3 show that a majority of the respondents (38%) suggested that they had been in operation for between 6-10years, 23% were in operation for 15 or more years. Furthermore, 20% were in operation for a period of between 11 and 15 years while 19% of the participants were in operation for a period between 0 and 5years as indicated in Figure 4.3. Firm age was measured in terms of the number of years of operation of the companies. The

number of years in operation could be a crucial demographic variable to consider. Organizations that have been in operation for a longer period may have more experience in dealing with risks and may have developed more sophisticated risk management strategies compared to newer organizations. Thus, the number of years in operation can influence the effectiveness of risk management strategies and ultimately impact the firm's competitiveness (Baker & Sinkula, 2016). The results presented in the Figure 4.3:

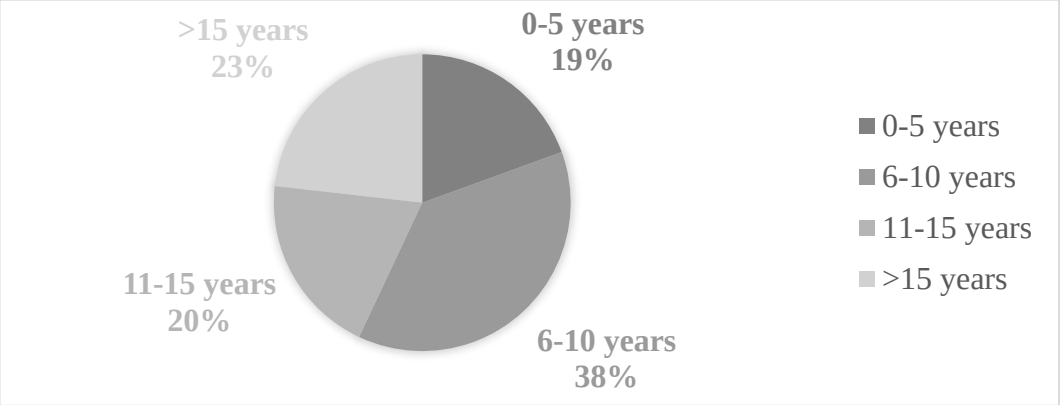

Figure 4.3: Trading Period

4.4.4 Sub Counties

The study sought to establish the sub counties from which the SMEs were situated. The findings in Table 4.8 revealed that a majority of respondents were from Kisumu Central sub county (41.0%), followed by Kisumu West Sub County and Nyando County both at (12.3%), Kisumu East and Seme County respondents were at 10.2%, Nyakach County followed with 7.5% and Muhoroni County response rate was at 6.5%. The results demonstrated that, Majority of the respondents operated in Kisumu town, which is Kisumu Central, but the Sub Counties were also able to respond meaning we also have businesses in the rural areas. This implies that businesses within the County are widely spread. The findings on the SMEs location are shown in Table 4.8.

Table 4.8: Sub County

Sub County	Frequency	Percentage
Kisumu West	36	12.3%
Kisumu Central	120	41.0%
Kisumu East	30	10.2%
Seme	30	10.2%
Muhoroni	19	6.5%
Nyando	36	12.3%
Nyakach	22	7.5%
Total	**293**	**100%**

4.4.5 Legal Structure

The respondents were also asked to indicate the legal structure of their SMEs. The findings show that majority of the SMEs (50%) were legally registered as companies in Kenya. Sole proprietors were represented by 36% while the remaining 14% were operated as partnership forms of businesses. This indicated a fair distribution of ownership structure and thus, giving all SMEs a fair playing ground. The results are shown in Figure 4.4.

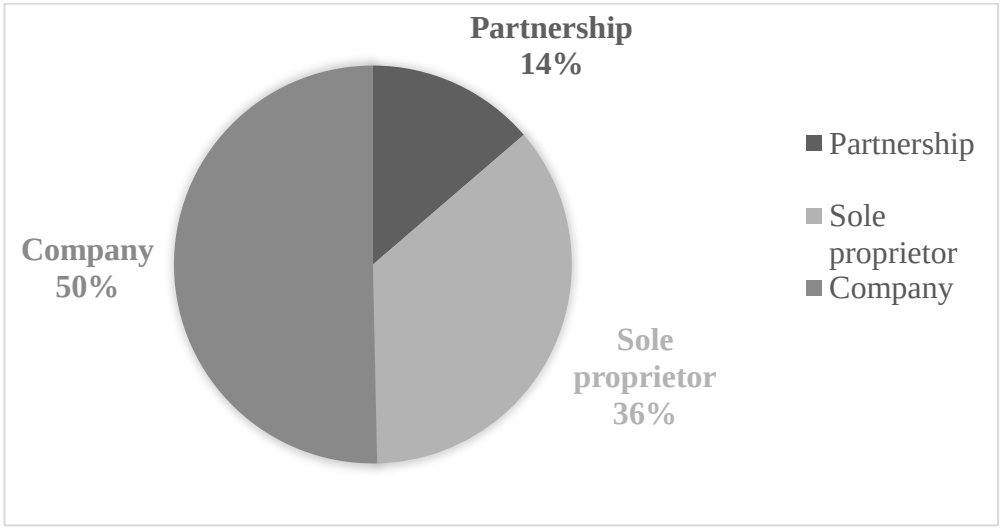

Figure 4.4: Legal Structure

4.4.6 Cost of Annual Trading License

The study also sought to determine the cost of annual trading license operation of the respondents from the various SMEs who were included in the study. The findings are

outlined as shown in Figure 4.5 revealed that a majority of the respondents (53%) stated that they paid the County government of Kisumu, a license fee of between Ksh 5,000 to Ksh 20,000. Another 25% stated that they pay a license fee of between 21,000 to Ksh 40,000, while another 10% indicated that they pay a license fee of between Ksh 61,000 to 80,000. Nonetheless, a small group of approximately 2% of the respondents did indicate that they had not paid any money as the license fee for running their business. These results are shown in Figure 4.5.

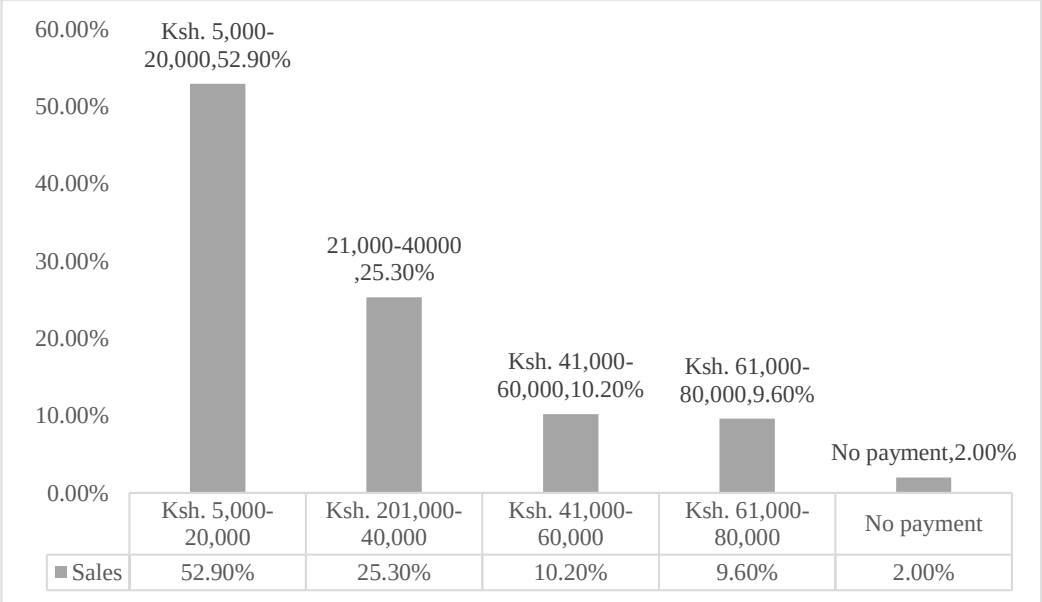

Figure 4.5: Annual Trading License Fee

Accordingly, competition in the marketplace and the need to control business operations and legislation has seen businesses attract different license rates with the aim of creating an environment in which all businesses can operate smoothly, and businesses maintain profitability in their operation. With introduction of County governments in Kenya, various Counties have also introduced various licenses that are passed and debated by Members of County assemblies. Kisumu County as a County government was not left out and hence the need to evaluate the annual trading licenses paid.

4.5 Descriptive Results

This research study sought to establish whether risk management strategies influences competitiveness of SMEs in Kenya. This section provides the descriptive analysis of predictor variables (risk avoidance, risk transfer, risk retention and risk mitigation), moderating variable (firm size) as well as competitiveness (the predicted variable). The findings are presented in tables and pie charts. The respondents were drawn from the seven sub counties of Kisumu County.

4.5.1 Risk Avoidance Strategy

This sought to establish the influence of risk avoidance on the competitiveness of SMEs in Kenya. Risk avoidance was operationalized by use of ten (Seven) questionnaire items on a five-point likert scale together with (three) open ended questions. The study first sought to answer the open and closed ended questions of this variable and the results presented in the figures that follow. First, the study sought to establish the number of times the various SMEs had pulled out of a business investment due to the associated risks. The findings revealed that a majority of respondents (61.0%) suggested that they had never pulled out of any form of investment because of the associated risks. 25% of the respondents indicated that they had done so once, while 11.0% were of the view that they had indeed pulled out of an investment twice. Nonetheless, a paltry 3.0 percent had done three times. The results are shown in Figure 4.6.

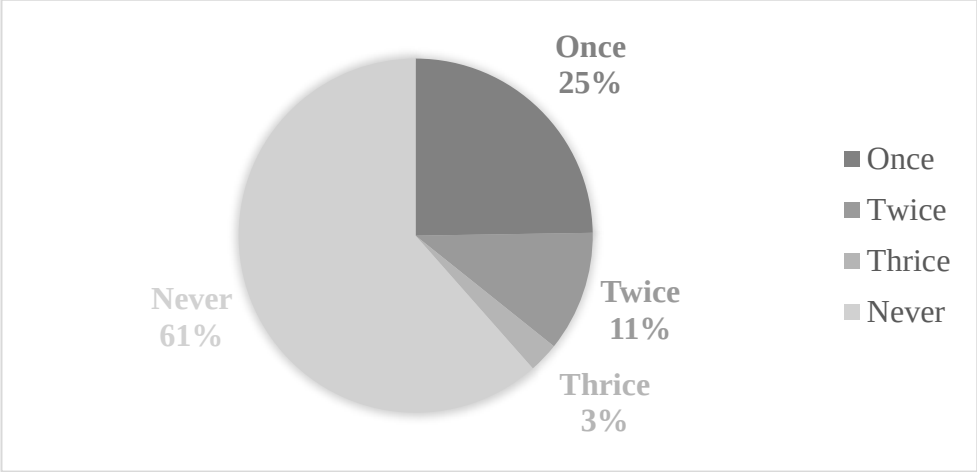

Figure 4.6: Frequency of Pulling Out of an Investment

Similarly, this study also sought to determine the number of times the various SMEs had conducted investment risk assessments in the last three years, prior to this study. The findings revealed that a majority of respondents (40.1%) were categorical that their business entities had never conducted any form of investment risk assessment in their last three years of operation. Another 38.4 per cent indicated that their business entities had only conducted investment risk assessment once, in the last three years. Only 15.1% had conducted this assessment twice,5.5% done it thrice, with a paltry 0.9% of the respondents indicating that their firms had done risk assessment 4 times in the last three years. The results are shown in Figure 4.7:

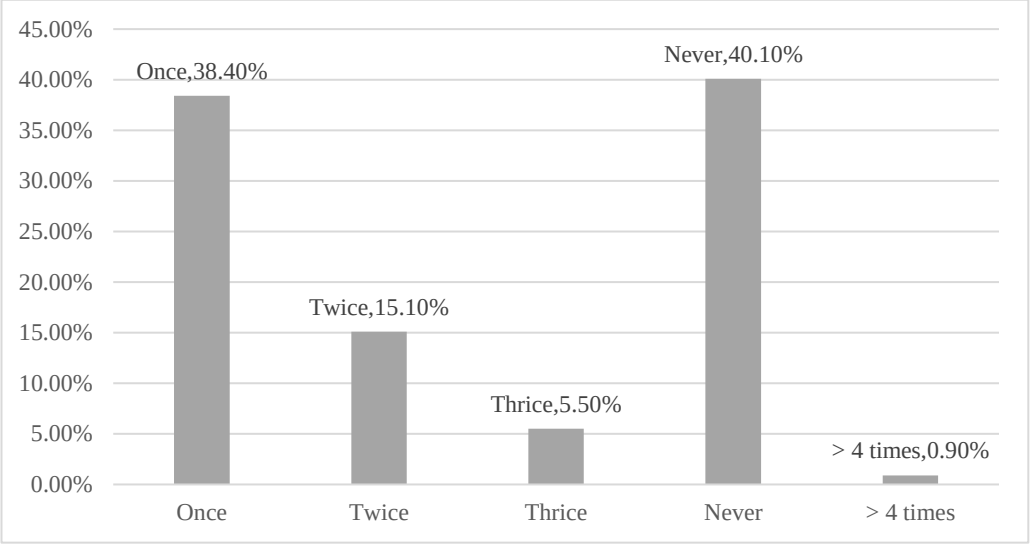

Figure 4.7: Risk Assessment in the Last 3 Years

Similarly, this study sought to find out the number times employees within the SMEs may have been taken through training on investment risk analysis. The findings in Figure 4.8 show that majority (48%) of the respondents were of the view that their firms had only trained people once, with another 20% saying that such training had only been conducted three times. Further, 13% of respondents indicated that the training in investment risk analysis had been conducted twice, with another 8% saying that training had been done between 5 to10 times in their firms. In addition, 7% had conducted such training 4 times while 3% were of the view that their firms had trained people 10 times. Nonetheless, 1% of the respondents were categorical that their SMEs had conducted any training on risk management. This are as indicated in Figure 4.8;

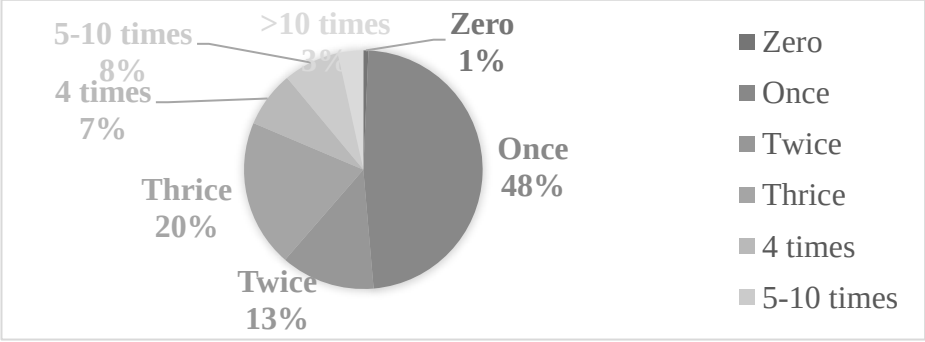

Figure 4.8: Employee Training

Furthermore, this study also did seek to determine the level to which risk avoidance strategy is utilized by the SMEs in Kisumu County in order to enhance their own competitiveness within the industry. The construct of risk avoidance was measured by seven questionnaire items on a 5-point likert scale from 5= strongly agree to 1= strongly disagree.

The results in Table 4.9 indicated that a majority of respondents (63.1 per cent) strongly disagreed with the statement suggesting that their firms often delay entering new markets, while at the same time another 25.3 per cent also disagreed with the statement. On the other hand, only 1.4 per cent strongly agreed with the statement, with another 2.0 per cent disagreeing too. Nonetheless, 8.2 per cent of the respondents remained indifferent to the statement. They neither agreed nor disagreed with it. Similarly, the study also sought to establish whether the SMEs in Kisumu County simply focuses on less risky geographies. From the finds in Table 4.9, a majority of the respondents (37.1 per cent) strongly disagreed with this view, with another 19.7 per cent simply disagreeing with the statement. On the contrary, 4.7 per cent of the respondents strongly agreed, with another 16.0 per cent simply agreeing with it. However, 22.4 per cent of those surveyed remained neutral to the statement.

On the other hand, a majority of the respondents (40.3 per cent) agreed that their firms have strict documentation policies for creditors, with another 22.5 per cent also agreeing with this statement. Similarly, a paltry 1.4 per cent strongly disagreed with this statement, with another 3.1 per cent simply disagreeing. Furthermore, a majority of respondents (49.5%) disagreed that their organizations often avoid working with some suppliers. A further 4.5 per cent strongly disagreed with the same statement. On the contrary, 19.8 per cent of the respondents strongly disagreed with the statement, with another 19.8 per cent simply disagreeing with the said statement. 26.1 per cent could not agree or disagree with the same statement.

A majority (37.5 per cent) of those surveyed did agree with the view that their organizations have so far taken them through risk avoidance training. A further 21.2 per cent strongly agreed with the statement. On the contrary, 11.9 per cent of those surveyed strongly disagreed that this has not taken effect within their firms. A further

8.5 per cent also disagreed. Nonetheless, 20.8 per cent could neither agree nor disagree with the statement. In addition, 50. 5 per cent (a majority) of respondents strongly agreed that the company allows them to often use the available resources to meet the demands of their customers. A further 28.3 per cent did agree with the same statement. On the other hand, only 3.1 per cent of the respondents disagreed with the statement, although another 18.1 per cent could neither agree nor disagree. Furthermore, a majority (43.8 per cent) of the respondents also agreed that the SMEs often rely on their own resources of the respective firms for their temporary needs. 29.3 per cent strongly agreed with the statement. On the converse, 6.9 per cent strongly disagreed with the said statement, while a paltry 0.3 per cent simply disagreed. 19.7 per cent of those surveyed remained indifferent to the statement. These findings are presented in Table 4.9 as shown.

Table 4.9: Risk Avoidance Strategy

Item	SD %	D %	N %	A %	SA %	Mean	SD
Market Avoidance							
Often delay entering new markets	63.1	25.3	8.2	2.0	1.4	1.53	.838
Mostly focuses on less risky geographies	37.1	19.7	22.4	16.0	4.7	2.49	2.812
Internal Controls							
Often has strict documentation policies for creditors	1.4	3.1	32.8	40.3	22.5	3.80	.871
Often avoids working with some suppliers	4.5	49.5	26.1	19.8	19.8	3.61	.855
Resource Development							
Employees fully trained on risk avoidance	11.9	8.5	20.8	37.5	21.2	3.47	1.251
Often uses available resources to meet customer demands	0.0	3.1	18.1	28.3	50.5	4.26	.862
Often depends on its resources for firm's temporary needs	6.9	0.3	19.7	43.8	29.3	3.88	1.056

This study also sought to establish whether there are other risk avoidance strategies besides the ones mentioned that the various enterprises may have embraced in order

to enhance their own competitiveness. Accordingly, risk avoidance involves the complete elimination of any hazards which might harm the enterprise, its own assets or even its stakeholders. It's a deliberate tactic that requires a systematic approach consisting of five steps of risk identification, assessment of risk probability and its potential impact, calculation of risk exposure by quantifying potential losses and taking steps to eliminate the risk. Therefore, risk avoidance removes any chance the risk may even become a reality. It's one strategy that tends to deflect as many threats as possible in order to avoid its costly consequences.

Nonetheless, various responses were given to indicate that the enterprises in question tend to employ other types of risk avoidance strategies to enhance their competitiveness. Normally, some enterprises choose not to make risky investments. For instance, buying of smaller companies and integrating their technologies into their own enterprises. By choosing not to invest, they tend to avoid the risk of losing out on the business. Secondly, a number of respondents suggested that some of the enterprises would prefer to implement proven and pre-tested technology instead of implementing a new and untested one. This helps the company avoid the risk of breakdown or breaches of data.

4.5.2 Risk Transfer Strategy

This study sought to determine how risk transfer strategy is used in the various SMEs within Kisumu County. Risk transfer was measured by seven questionnaire items on a 5-point likert scale from 5= strongly agree to 1= strongly disagree. However, before the likert scale was analysed, the study had to answer three more closed ended questionnaire items. First, the study sought to establish whether the various SMEs had any insurance policy to guard against the various risks, and which particular ones. The findings were recorded in Table 4.10.

These results showed that 25 per cent of the respondents indicated that their firms had taken goods on transit /goods in stock policy, as well as the general liability insurance policy. Further, 9 per cent of the respondents had insurance policy against fires, 2 per cent, insurance policy against terrorism, none had insurance on automobiles, while the insurance against data breach was at 3 per cent. Equally, the insurance policies against

business interruptions, cyber risks and professional liability each had a paltry 1 per cent of the respondents suggesting that their firms did have such. Similarly, product liability policy and work man injury insurance policy had response rate of 6 per cent and 9 per cent respectively. On the contrary, a whopping 39 per cent of the respondents opined that, their firms did not have any insurance policy at all. The stated results are shown in Table 4.10:

Table 4.10: Insurance Policies

Insurance Policy	Percentage (%)
Goods	25%
Fire	9%
Terror	2%
Automobile	0%
Data Breach	3%
Officers Insurance	19%
General Liability	25%
Business Interruption	1%
Cyber Risk	1%
Professional Liability	1%
Product Liability	6%
Work man injury	9%
None	39%

Similarly, this study also sought to find out the services that are most commonly outsourced by the various SMEs in Kisumu County. The results were presented in Table 4.11. The findings revealed that a majority of the respondents (37 per cent) were of the view that supplies was the main service that was outsourced out, while another 29 per cent said that the service mostly outsourced was marketing. Furthermore, 28 per cent of respondents suggested that accounting and finance as a service, was also mostly outsourced out by the SMEs, with another 20 per cent suggesting that their firms also outsource customer service. Nonetheless, administration and operations services were supported by 8 per cent and 4 per cent of respondents respectively. Accordingly, no respondent reported that his or her firm outsourced human resource functions. Thus, these findings are shown in Table 4.11:

Table 4.11: Outsourced Services

Insurance Policy	Percentage (%)
Supplies	37%
Administration	8%
Customer Service	20%
Accounting/Finance	28%
Marketing	29%
Operations	4%
Human Resources	0%
None	14%

Further, the study also sought to establish how often the different businesses under study conduct portfolio risk assessment in a financial year. The findings were also presented in Figure 4.9 as shown. However, these results indicated that a majority of the respondents (45.10 per cent) were of the view that such a thing had never happened in their own firms. On the other hand, 18.9 per cent of the respondents claimed that the respective firms conduct portfolio risk assessment twice in a financial year, while 15.5 per cent suggested that it only happens once in a financial year. 12.4 per cent of said that this assessment only happens once in two years, while another 8.0 per cent were of the view that within their respective firms, portfolio risk assessment is conducted quarterly. The results are as shown in Figure 4.9:

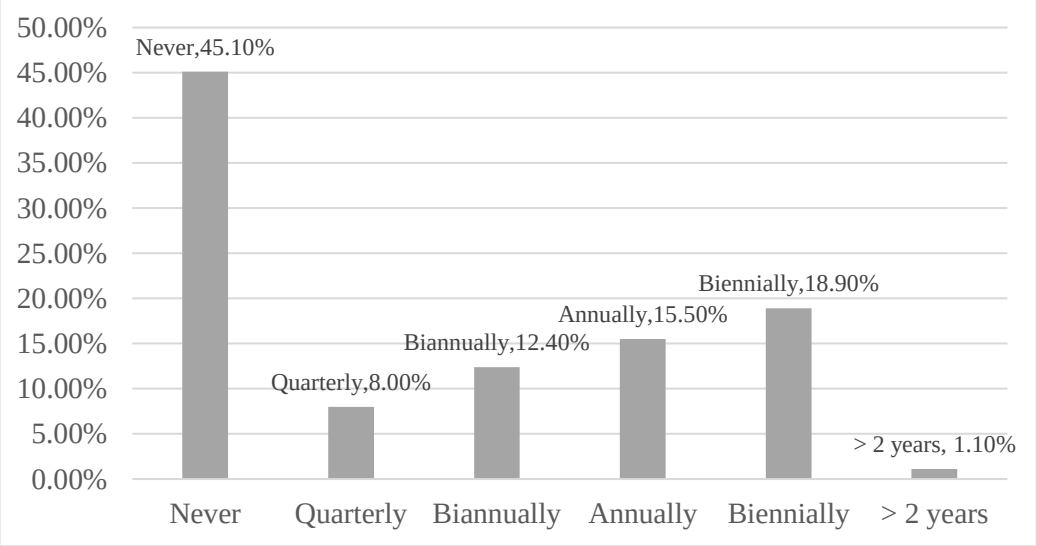

Figure 4.9: Frequency of Portfolio Risk Assessment

In addition, this study sought to determine how the SMEs utilize the risk transfer strategy to leverage on their own competitiveness in Kisumu County. The construct of risk transfer strategy was measured by seven questionnaire items on a 5-point likert scale from 5= strongly agree to 1= strongly disagree. The results were presented in Table 4.12.

The findings in Table 4.12 revealed that a majority of the respondents (39.2 per cent) agreed that their organizations have reliable risk profiling methods in place. Another 16.0 per cent strongly agreed with the statement. However, 11.8 per cent of the respondents strongly disagreed with the statement, with another 11.1 per cent simply disagreeing. Nonetheless, 21.9 per cent remained indifferent to the statement. Furthermore, a majority of respondents (38.6 per cent) agreed to the statement seeking to establish whether the various SMEs do invest in the insurance to mitigate against the losses. A further 22.2 per cent strongly agreed that this was indeed the case with their firms. On the contrary, 10.9 per cent strongly disagreed, while a further 7.8 per cent simply said that this was not the case in their firms. However, 20.5 per cent of the respondents did not agree or disagree with the statement.

Similarly, a staggering majority of respondents (33.3 per cent) could neither agree or disagree with the statement seeking to establish whether the respective SMEs in Kisumu County outsource most of their business functions. However, at close range, another 31.7 per cent did agree that most of their business functions are outsourced. A further 15.0 per cent strongly agreed with the statement. On the contrary, 11.6 per cent of the respondents strongly disagreed with the statement, while another 7.8 per cent simply disagreed. The findings in table 4.12 also revealed that a majority of the respondents (33.4 per cent) made clear that their firms have become members to various business associations. Another 21.3 per cent of the respondents strongly agreed that this was indeed true. On the other hand, 11.3 per cent of respondents strongly disagreed with the same statement, with another 10.2 per cent simply disagreeing. Nonetheless, 23.9 per cent of the respondents could neither agree nor disagree with the statement. Finally, a majority of respondent agreed (A=35.6 per cent, SA=7.8 per cent) that their firms do contract some of their business operations. However, another huge number of respondents (35.6 per cent) could neither agree nor disagree with this

statement. Yet, 11.6 per cent of respondents strongly disagreed, with another 9.2 per cent of them simply disagreeing that this was not the case in their respective organizations.

Table 4.12: Risk Transfer Strategy

Item	SD %	D %	N %	A %	SA %	Mean	SD
Insurance							
Reliable risk profiling method in place	11.8	11.1	21.9	39.2	16.0	3.36	1.219
Investment in insurance to mitigate losses	10.9	7.8	20.5	38.6	22.2	3.83	3.307
Outsourcing							
Outsourcing of most business functions	11.6	7.8	33.8	31.7	15.0	3.31	1.171
Member of various business associations	11.3	10.2	23.9	33.4	21.2	3.43	1.247
Contracting							
Contracting of Operations	11.6	9.2	35.6	35.6	7.8	3.32	2.572

This study also sought to find out if the various enterprises embrace other types of risk transfer strategies in order to increase their competitiveness in the market place. Risk transfer helps a business to rely on some crucial relationships with consumers, subcontractors, contractors and vendors. According to a majority of the responses, there is a growing trend involving contracts in which one party agrees to assume the liabilities of another party. Similarly, other enterprises prefer to purchase insurance policies, which specify that the risk of loss is passed from the policyholder to the insurer.

4.5.3 Risk Retention Strategy

The study went forth to establish how far the various SMEs in Kisumu County utilize the strategy of risk retention in order to leverage on their competitiveness in the industry. The predictor variable (risk retention strategy) was operationalized by use of seven questionnaire items. However, the study first sought to establish the number of times the various SMEs had carried out market research activities. The findings in Figure 4.10 revealed that a majority of respondents (40 per cent) suggested their firms

had only done so once. Another 20 per cent of respondents said twice, while 13 per cent of the respondents mentioned that their respective firms had carried out market research three times. On the other hand, 27 per cent of the respondents were categorical that their firms had never carried out market research activities. The results found were as shown in Figure 4.10:

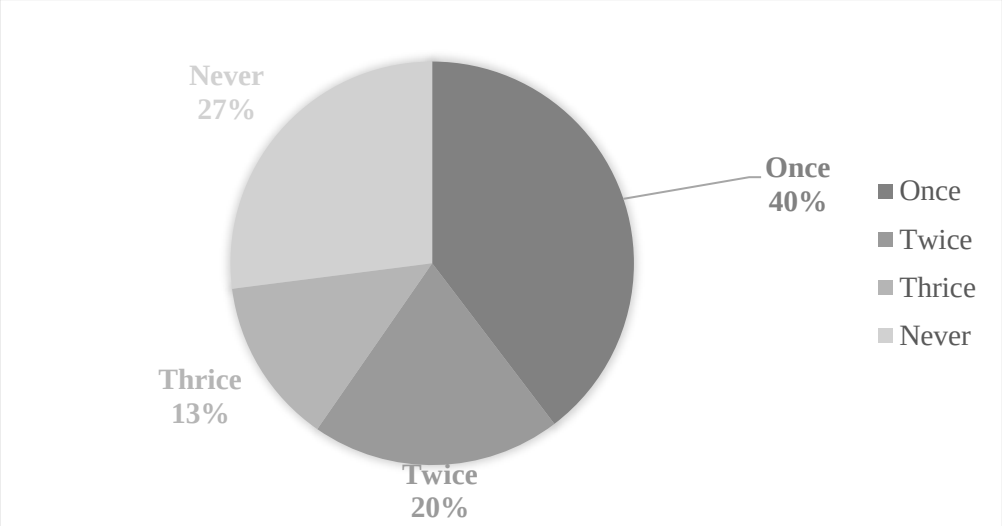

Figure 4.10: Frequency of Market Research in the Past 3 Years

Further, the study sought to establish the amount of money the various SMEs do invest in research and development on an annual basis. Similarly, the results in Figure 4.11 revealed that a majority of respondents (42.8 per cent) were of the view that their respective firms have not invested any amount of money to this course at all. 29.10 per cent said that the respective firms have so far invested less than Ksh.100, 000 in research and development. A further 16.1 per cent of the respondents suggested that an investment of between Ksh 100,000 and Ksh. 250,000 had been invested in research and development by their respective firms. On the other hand, 11.9 per cent of the respondents were of the view, that their firms had done slightly better by investing more than Ksh. 250, 000 on an annual basis. The results obtained are as shown in Figure 4.11.

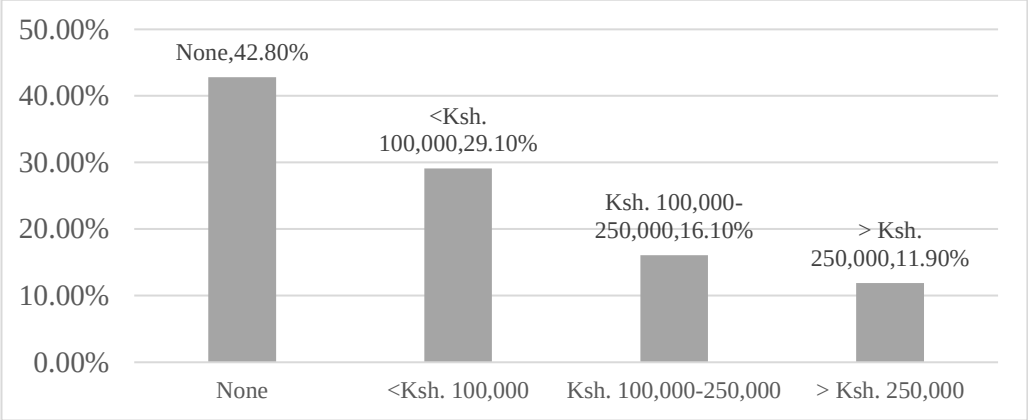

Figure 4.11: Annual Investment in Market Research

Furthermore, thisstudy also sought todetermine how the various SMEs tend to utilize the risk retention strategy in order to leverage on their own competitiveness in Kisumu County. The construct of risk retention strategy was measured by seven questionnaire items on a 5-point likert scale from 5= strongly agree to 1= strongly disagree. The results were presented in Table 4.13.

The findings in Table 4.13 indicated that 64.2% (majority) of respondents, cumulatively agreed (A=46.8 per cent, SA=17.4 per cent) that their firms often have used collateral in order to get credit facilities from financial institutions. Only 5.4 per cent of the respondents strongly disagreed with this fact, with another 12.3 per cent simply disagreeing with it. 18.1 per cent could neither agree nor disagree with the same statement. Similarly, 69.9 per cent (a super majority) of respondents agreed (A=48.8 per cent SA= 20.8 per cent) that their respective firms always operate on a realistic budget. Only 1.5 per cent (SD) of the respondents and 5.5 per cent (D) were of the view that their firms do not operate on a realistic budget. 23.2 per cent could neither agree not disagree with the statement.

Equally, a majority of respondents (48.5 per cent) agreed that the respective SMEs that they work for do employ continuous training and development activities. Another 17.4 per cent strongly agreed with this statement. On the contrary, a mere 9.2 per cent (a minority) cumulatively disagreed (SD=4.1 per cent, D=5.1 per cent) with the said statement. Nonetheless, 24.9 per cent of the respondents could not agree or disagree with the statement as it. Consequently, a majority of the respondents (60.1 per cent)

agreed that the SMEs frequently conducts situational analysis in order to understand the market trends. A further 13.0 per cent strongly agreed with this statement. On the other hand, only 4.4 per cent of the respondents could cumulatively disagree (SD=2.4 per cent, D=2.0 per cent) with the same statement. Nonetheless, 22.5 per cent of the respondents remained indifferent to the statement as it is.

Furthermore, a majority of the respondents (43.0 per cent) also agreed that their firms have got capacity to innovate new products process service, while another 17.1 per cent strongly agreed with the same statement. Similarly, only 4.8 per cent of the respondents could strongly disagree, with another 9.2 per cent simply disagreeing. 25.9 per cent did not agree or disagree. Finally, a super majority of the respondents (83.8 per cent) strongly agreed that their respective firms have got reserve funds to deal with the unexpected happenings. A further 12.4 per cent also agreed to the said statement. On the other hand, none of the respondents disagreed nor strongly disagreed with the statement as it is, but 3.8 per cent of the respondents remained neutral to the statement.

Table 4.13: Risk Retention Strategy

Item	SD %	D %	N %	A %	SA %	Mean	SD
Financing							
Often has collateral to get credit from financial institutions	5.4	12.3	18.1	46.8	17.4	3.77	2.658
Always operate with a realistic budget	1.7	5.5	23.2	48.8	20.8	3.82	.884
Capacity Development							
Employee continuous training & development	4.1	5.1	24.9	48.5	17.4	3.70	.954
Frequently conducts situational analysis to understand market trends	2.4	2.0	22.5	60.1	13.0	3.79	.781
Research & Development							
Capacity to innovate new products process service	4.8	9.2	25.9	43.0	17.1	3.58	1.029
Reserve funds to deal with unexpected happenings	0.0	0.0	3.8	12.4	83.8	4.80	.488

This study also sought to find out if the various enterprises embrace other types of risk retention strategies in order to increase their competitiveness in the marketplace. Risk

retention can be seen to be a decision made by either the individual or an enterprise to take full responsibility for a particular risk faced, rather than transferring the risk to the insurance company or purchasing an insurance policy. Mostly, this happens when the cost of doing business is considered to be less than the cost of either partially or fully insuring against it. Secondly, companies may choose to retain a risk if such a risk is not insurable or rather, such a risk falls below their policy deductible. This is certainly a forced kind of risk retention strategy. Accordingly, a majority of responses obtained indicated that a majority of respondents suggested that there are mainly two types of risk retention strategies employed by the various enterprises. That is, voluntary risk retention and forced risk retention strategies. They use voluntary risk retention strategies when they choose to forgo insurance and retain their risk because they are big enough to absorb the potential losses, and hence save some money by failing to purchase the insurance. Similarly, organizations may also be forced to retain their risks when such risks are excluded from coverage or are uninsurable or when the value of the loss is less than their policy deductible.

4.5.4 Risk Mitigation Strategy

This research study aimed to assess the extent to which various SMEs in Kisumu County utilize risk mitigation strategies to enhance their competitiveness in the industry. The predictor variable, risk mitigation strategy, was measured using seven questionnaire items. Before addressing this, the study first sought to determine the number of collaborations that these SMEs had engaged in over the past three years.

The findings, as illustrated in Figure 4.12, indicate that the majority of respondents (38.0%) reported that their firms had not engaged in any collaborations. Meanwhile, 36.0% stated that their firms had participated in one collaboration, 15% reported two collaborations, and 10% indicated that their firms had engaged in three collaborations. Only 1% of respondents noted that their firms had engaged in more than three collaborations over the past three years.

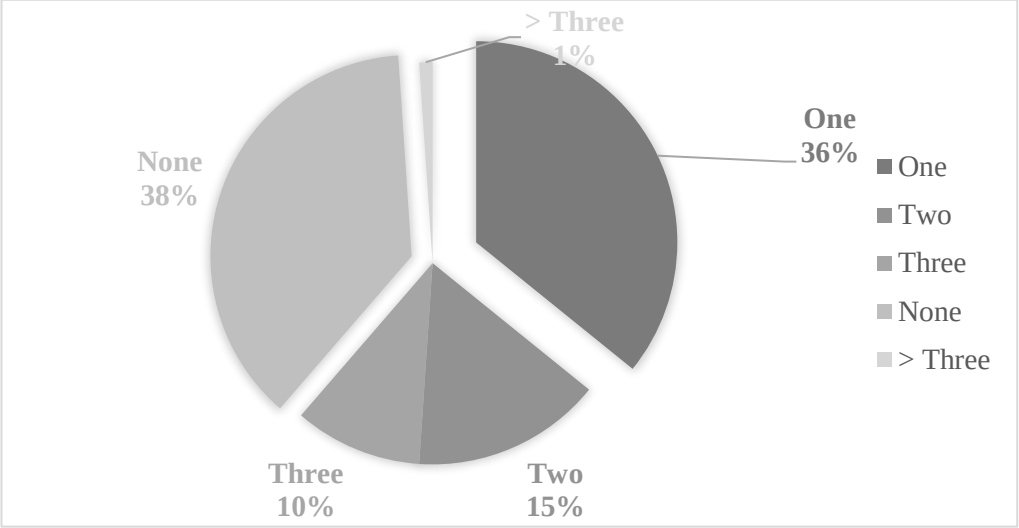

Figure 4.12: Mergers/Collaborations in the Past 3 Years

Similarly, the study also sought to find out the frequency at which the various SMEs get to carry out financial audits. The findings in Figure 4.13 indicated that a majority of the respondents (47 per cent) were of the view that their own firms carry out financial audits once in a financial year. 32 per cent of the respondents even suggested that financial audits have never been conducted in their firms, while only 3 per cent said that financial audits are conducted three times in a year. Another 3 per cent of respondents also said these audits are conducted more than three times a year. 15 per cent of the respondents were categorical these audits are conducted at least twice in a financial year. These results are presented in the Figure 4.13:

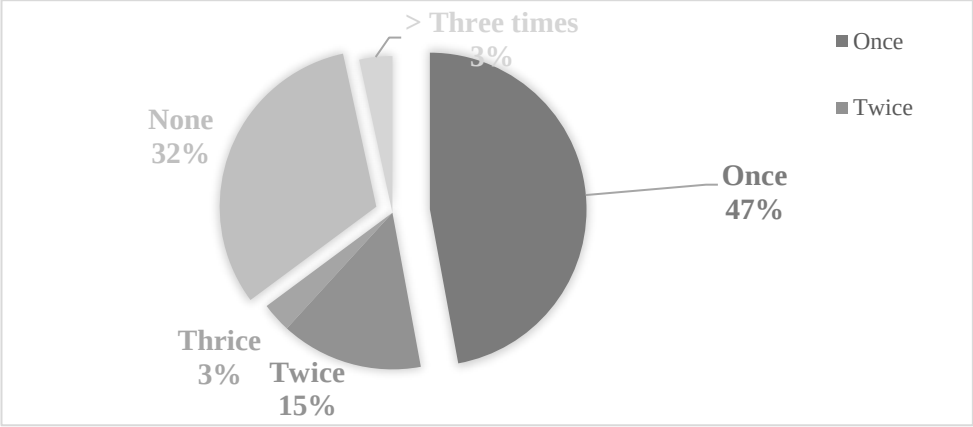

Figure 4.13: Frequency of Audits per Year

Furthermore, thisstudy also sought to determine how the various SMEs tend to utilize the risk retention strategy in order to leverage on their own competitiveness in Kisumu County. However, the construct of risk retention strategy was then measured by seven questionnaire items on a 5-point likert scale from 5= strongly agree to 1= strongly disagree. The results were presented in Table 4.14.

The results obtained in Table 4.14showed a majority of respondents (42.8 per cent) agreed that the collaboration between their firms and other players in the industry has greatly reduced the exploration by the middlemen. On the contrary, only 6.8 per cent of those surveyed strongly disagreed with this statement, with another 4.8 per cent only opting to simply disagree. 21.2 per cent of the respondents chose to remain indifferent to the statement. They neither agreed nor disagreed with the statement. A further 24.3 per cent of the respondents strongly agreed with the same statement. In another declarative statement, a majority of the respondents (50.7 per cent) did strongly agree that their firms collaborate with their suppliers. Another 27.1 per cent simply agreed that indeed this was the case in their firms. Only 3.1 per cent of the respondents strongly disagreed with this fact, with another 5.1 per cent simply disagreeing with it. 14.0 per cent of the respondents could neither agree nor disagree with the same statement. Cumulatively, 54.8 per cent (A=39.4 per cent, SA=15.4 per cent) of respondents agreed that their respective firms often collaborate with other business entities to promote technology development. On the other hand, only 3.8 per cent of the respondents strongly disagreed with the statement, with another 8.2 per cent simply disagreeing with the same statement. However, a whooping 33.2 per cent of the respondents could neither agree nor disagree with the statement.

In addition, a majority of respondents 46.1 per cent of the respondents did agree that their firms have fully implemented some kind of an audit system, with another 23.5 per cent strongly agreeing with this statement. On the other hand, an accumulative rate of 17.4 per cent of the respondents (A=11.6 per cent, SD=5.8 per cent) disagree with the statement. Thus, 13.0 per cent could neither agree nor disagree with the statement. Similarly, a super majority of respondents (A=51.7 per cent, SA=19.5 per cent) cumulatively agreed that their firms highly consider the view from their top managers in their effort to mitigate against any form of risk. and 3.4 per cent (SD) and another

4.5 per cent were of the view that risk mitigation had nothing to do with the top management and therefore, these categories of employees were not involved anywhere during the mitigation of risks within the firms. 20.9 per cent could neither agree nor disagree with said statement.

In addition, the findings in Table 4.14 also revealed that accumulative majority of respondents (A=42.5 per cent and SA=20.9 per cent) were affirmative that their organizations often prepare risk intervention plans. On the other hand, only 4.8 per cent strongly disagreed with this statement, with another 7.9 per cent merely disagreeing. Nonetheless, 24.0 per cent could neither agree nor disagree with the same statement. Consistently, another majority of respondents (A=36.3 per cent, SA=34.2 per cent) did agree that their firms have got well-coordinated internal systems. Equally, only 1.4 per cent of the respondents strongly disagreed, with another paltry 5.5 per cent simply disagreeing. Nonetheless, 22.6 per cent of the respondents remained indifferent to the said statement. Finally, 32.2 per cent of the respondents did agree that their organizations have acquired specialized software which is used to assess the various risks. 20.9 per cent strongly agreed with the statement. On the other hand, only 5.1 per cent of the respondents could strongly disagree, with another 10.6 per cent just disagreeing. However, this item had the highest number of respondents remaining neutral at 31.2 per cent. These findings are presented as shown in Table 4.14

Table 4.14: Risk Mitigation Strategy

Item	SD %	D %	N %	A %	SA %	Mean	SD
Mergers and Collaborations							
Collaboration/mergers has reduced middlemen exploitation	6.8	4.8	21.2	42.8	24.3	3.73	1.093
Often collaborate with other its suppliers to reduce middlemen	3.1	5.1	14.0	27.1	50.7	4.17	1.051
Often collaborated with other business entities to promote technology development	3.8	8.2	33.2	39.4	15.4	3.54	.975
Management Involvement							
Fully implemented an audit system	5.8	11.6	13.0	46.1	23.5	3.70	1.125
Views of top management are fully involved in risk mitigation	3.4	4.5	20.9	51.7	19.5	3.79	.923
Often prepares risk intervention plans	4.8	7.9	24.0	42.5	20.9	3.67	1.043
Technology adoption							
Well-coordinated internal system	1.4	5.5	22.6	36.3	34.2	3.97	.955
Acquired specialized software used to assess risk	5.1	10.6	31.2	32.2	20.9	3.53	1.092

This research study also sought to establish other mitigation strategies embraced by the various enterprises in order to increase their competitiveness in the marketplace. Accordingly, risk mitigation is an overall approach that helps to prevent, reduce and also manage the severity of risk. It involves being vigilance about the fact there is a risk in whatever one carries out. That is, being aware of the potential risks, recognition and development of strategies to reduce the risk level, offering support to implement these strategies and working together to evaluate the success of the various strategies.

However, the respondents suggested that their enterprises do employ a number of risk mitigation strategies, which included the transferring of one risk factor for a less "risky" option. Assessment of the risk, establishing check ins and the shipment verification procedures. This is done through the checking of seals, together with the accompanied documentation. Furthermore, other respondents were of the view, that their enterprises tend to restrict movements of outsiders while the set foot within the precinct of the company, while many other respondents suggested that within their

enterprises, key check in and check procedures are performed religiously. Further, individuals are physically inspected while going out of the premises. Similarly, members of staff are not allowed to carry personal items into some of the production areas. Thus, risk mitigation strategies are supposed to be proactive and also be very reactive. Therefore, an enterprise should recognize the potential risks, assessing the risk, developing the strategies to reduce the level of risk or rather the number of risk factors. Implementing the strategies in order to reduce risk and then evaluating the effectiveness of reducing the risk level. All these account for some strategies to mitigate the risks.

4.5.5 Firm Size

This study also did seek to find out the extent to which firm size can contribute to the enhancement of the relationship between risk management strategies and competitiveness of the firm. Firm size was operationalized by four closed ended questionnaire items. The first item sought to establish the number of each of the selected organizations had. The results obtained in Figure 4.14 showed a majority of the respondents (44.0 per cent) indicated that their organizations had greater than 10 employees. 26.0% of the respondents suggested that their organizations had more than 49 employees, while another 20 per cent said that they had between 10 and 20 employees in their firms. 10 per cent of the respondents suggested a number between 21 and 49 employees within their respective firms. These findings are presented in the Figure 4.14:

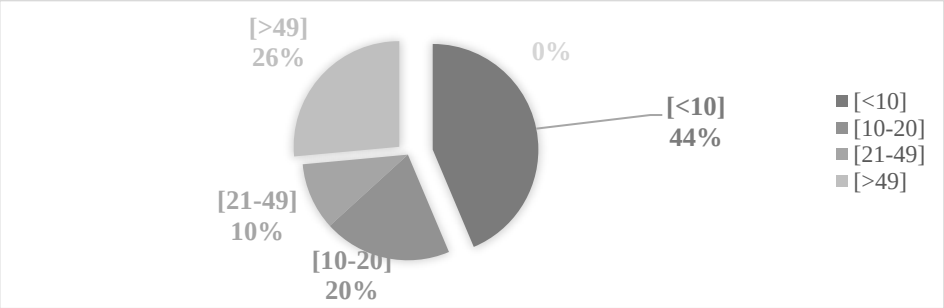

Figure 4.14: Number of Employees

Furthermore, the study sought to establish the annual financial turnover of the various SMEs for the last trading year. The findings revealed that a majority (43.6 per cent of respondents) of the SMEs had an annual financial turnover of less than Ksh. 150,000. 24.10 per cent of the respondents said that their firms had an annual financial turnover of between Ksh. 800,000-1,000,000, while 19.6 per cent claimed that their firms had registered an annual financial turnover of Ksh. 151, 000-Ksh. 399,000. Finally, 10,3 per cent of the respondents were of the view that their organizations had registered an annual turnover of Ksh. 400,000-Ksh. 799,000. These findings are as shown in the Figure 4.15:

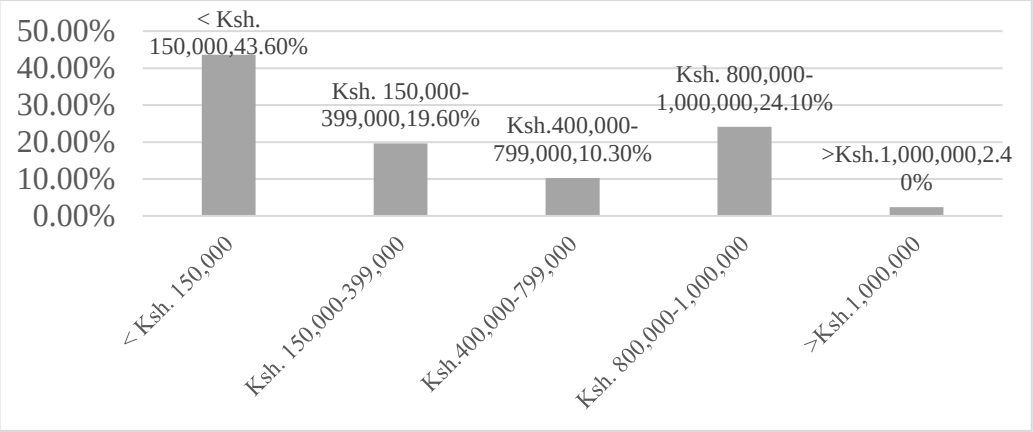

Figure 4.15: Annual Investment in Market Research

This study also sought to determine the number of outlets each of the SMEs in Kisumu County had. The results in 4.16 indicated that a majority (54 per cent of respondents) of the firms had just one outlet, the main one. Thirty (30%) per cent of the respondents said that their firms had only one more outlet, making the total number to be two for the entire organization. 7.0 per cent of the respondents indicated that their firms have 3 outlet each, while 9 per cent were categorical that their firms had more than three outlets. These results are as shown in Figure 4.16:

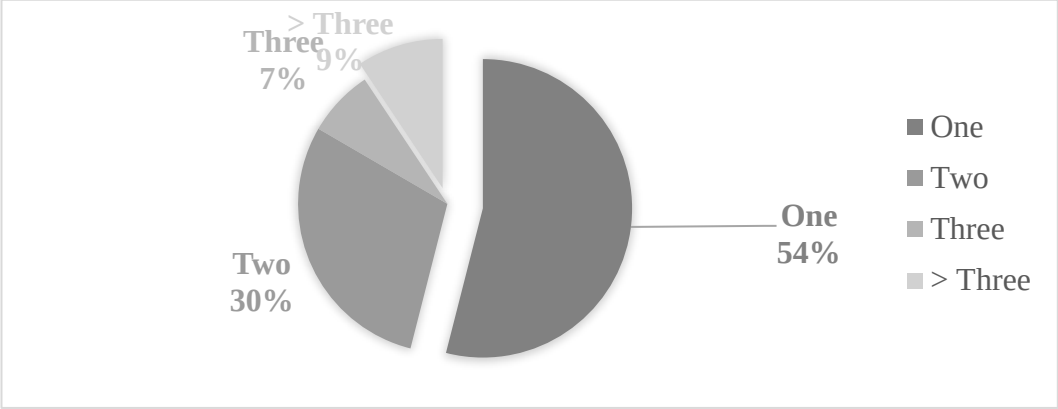

Figure 4.16: Number of Branches

Similarly, this study also sought to find out the most common capital base. The results obtained revealed that a majority of the respondents (26.4 per cent) were of the view that their firms had a capital base of Ksh. 1,000,000 and above. 24.0 per cent of the respondents suggested that their respective firms had a capital base of greater than Ksh. 150,000 but less than Ksh. 400,000. On the other hand, 15.80 per cent of the respondents opined that the firm that they work for had a capital base of between Ksh. 800,000- Ksh. 1,000,000. Furthermore, 12.3 per cent of the respondents said that their firms also had a capital base of between Ksh. 151,000-Ksh. 399,000. These results are also presented in Figure 4.17 as shown.

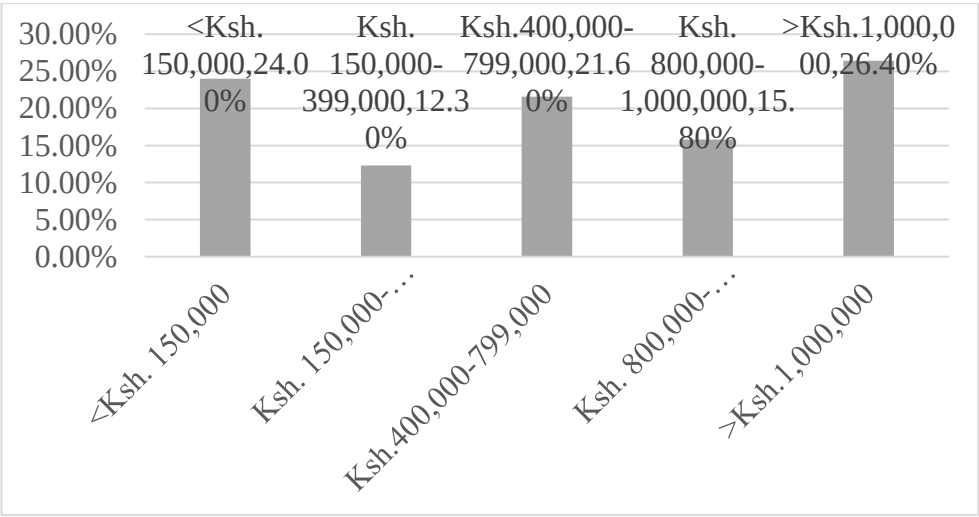

Figure 4.17: Capital Base

4.5.6 Firm Competitiveness

The study went further to determine how competitive the SMEs within the county of Kisumu were. Competitiveness was operationalized using both financial and non-financial indicators. The financial sub construct was measured using five closed ended questionnaire items, while the non-financial one was also measured by another five questionnaire items on a 5-point likert scale from 5= strongly agree (SA) to 1= strongly disagree (SD). The findings are presented as indicated in Tables 4.15 (a) and 4.15(b).

The findings in Table 4.15(a) revealed that a majority of respondents (33.2 per cent) were of the view that their organization had acquired a market share of between 10%-30% within the last three years. Further, 27.7 per cent of respondents suggested that the company they work for had acquired less that 10% of the market share. On the extreme end, 27.1 per cent of the respondents were of the view that they firms had acquired between 16% -100% of the market share over the past three years of operation. Nonetheless, only 12.0 per cent of respondents thought that their companies had acquired between 30%-60% of the market share within the same period. Further, the study sought to find out the percentage Average sales growth for the company within the last three years. The results in Table 4.15(a) indicate that a majority of respondents (29.1 per cent) were of the view that their sales had gone up by less that 10%. However, on the extreme, 25.9 per cent of respondents said that their firms had grown in sales by 61% to 100% within the last three years. In addition, 24.6 per cent of respondents were of the view that their firm greatly improved in their sales by a margin of between 31%-60%. However, 19.5 per cent of respondents were of the view that they had only grown their sales to the tune of 10% t0 30%.

As a result, the results in Table 4.15 (b) also suggested that a majority of respondents (34.6 per cent) were of the view that their firms had grown their revenues to the tune of 10%-30%. A further 25.7 per cent of respondents were of the view that they had grown by close to 61%-100% within the last three years, with another 27.7 per cent saying that theirs had grown by less than 10% within the same period. Nonetheless, 12.0 per cent were of the view that the firms had only grown in revenue by 31%-60% over the previous three years. Equally, this study sought to find out the profit margins

made the SMEs in Kisumu County over the last3 years. The findings revealed that a majority (32.9 per cent) of the respondents were of the view, their firms had made a profit margin of between 10%-30%. Another 32.2 per cent mentioned a profit margin of between 61%-100% over the last three years. Similarly, 26.7 per cent did suggest a profit margin of less than 10% over the same period. Only 8.2 per cent of respondents said that their firms had made a profit margin of between 31%-60% within the past three years. These findings are presented in Table 4.15(a) as shown.

Table 4.15(a): Financial Performance in the Past 3 Years

Measure	< 10%	10-30%	31-60%	61-100%
Average market share	27.7	33.2	12.0	27.1
Average sales growth	29.1	19.5	24.6	25.9
Average revenue growth	27.7	34.6	12.0	25.7
Average total revenue	23.6	29.1	19.9	26.5
Average profit margins	26.7	32.9	8.2	32.2

In addition, the non-financial sub construct of competitiveness was measured by five questionnaire items on a 5-point likert scale from 5= strongly agree (SA) to 1= strongly disagree (SD). The findings are presented as indicated in Tables 4.15(b). In the first instance, the study sought to establish whether the various SMEs are able to deliver customer orders without delay. The findings in Table 4.15 (b) indicated that a majority of respondents (45.5 per cent) strongly agreed with this statement, while another 36.0 per cent simply agreed with the same statement. However, only 5.5 per cent of respondents strongly disagreed, with another 6.2 per cent simply disagreeing. 6.8 per cent of respondents remained indifferent to the statement as it is. Similarly, a majority of respondents (70.5 per cent) also strongly agreed that their organizations are always a head in the launch of new products. Another 21.6 per cent of the respondents did agree with the said statement. On the other hand, a paltry 1.4 per cent strongly disagreed, with another 1.7 per cent also disagreeing. Only 4.8 per cent could neither agree nor disagree with the statement as it was.

Consequently, the findings in Table 4.15(b) show that a majority of respondents (55.8 per cent) strongly agreed that their organization is always updating its systems in order to meet the customer demands. Another 35.6 per cent of respondents also agreed with

the statement. On the contrary, only 1.7 per cent strongly disagreed with another 1.7 per cent simply disagreeing with the statement. 5.1 per cent of the respondents remained indifferent to the statement. On the other hand, a majority of the respondents (66.6 per cent) strongly disagreed with the statement that most of their customers are repeat clients. Another 4.4 per cent of the respondents simply disagreed with the same statement. However, 11.6 per cent of the respondents strongly agreed that most of their customers are repeat clients.10.2 per cent simply agreed with the same statement as it is. Nonetheless, 7.2 per cent could neither agree nor disagree with the said statement. Finally, a super majority of respondents (SA=43.2 per cent, A=30.8 per cent) were affirmative about the statement implying that their firms rarely lose their clients to their own competitors. On the contrary, a paltry 4.1 per cent strongly disagreed and another 2.1 simply disagreed with the same statement. However, 19.9 per cent simply remained indifferent, not agreeing or disagreeing with the statement. These findings are also presented in Table 4.15(b) as shown.

Table 4.15(b): Non-Financial Performance

Item	SD %	D %	N %	A %	SA %	Mean	SD
Always deliver customer orders without delay	5.5	6.2	6.8	36.0	45.5	4.10	1.122
Always a \head in new product launches	1.4	1.7	4.8	21.6	70.5	4.58	.780
Often updating its systems to meet customer demand	1.7	1.7	5.1	35.6	55.8	4.42	.811
Most of our customers are repeat clients	66.6	4.4	7.2	10.2	11.6	1.29	1.924
Rarely lose our clients to our competitors	4.1	2.1	19.9	30.8	43.2	4.07	1.040

According to the findings, the respondents indicated that they strongly agreed that they deliver customer orders without delays shown by a mean of 4.15(b) and a standard deviation of 1.122. They indicated that they strongly agreed that the organizations customers are repeat clients shown with a mean of 1.29 and standard deviation of 1.924. In relation to whether firm rarely loses clients to competitors they agreed with a mean of 4.07 and standard deviation of 1.040, they indicated they agreed in terms of the firm updating its systems to customers' demands as shown by a mean of mean of

4.42 and standard deviation of 0.811. In addition, the respondents showed that they agreed that company has launches new products shown by a mean of 4.58 and standard deviation of 0.78.

4.6 Tests of Assumptions

Five assumptions underpin the model and analysis of classical linear regression. These assumptions are required to show that the techniques of estimation have desirable characteristics and further, the hypotheses tests regard the coefficient estimates can be conducted validly (Jiang, Gollan, & Brooks, 2015). Thus, this research study tested assumptions of normality, linearity, Collinearity, homogeneity and auto correlation before the regression analysis was carried out.

4.6.1 Test for Normality

The assumption of normality presumes that residuals are distributed normally. According to Wilson (2014) a good data in research is one that can be said to be distributed normally. This research study used Kolmogorov-Smirnov test to test for normality. The test can detect the departure of data from normality due to either skewness or kurtosis or even both. It is best suited when a sample size is greater than 50 (Ogwel & Eshiteti, 2022). The threshold or rule of the thumb suggests that a variable data is close to normal if its skewness and kurtosis have got values that range between –1.0 and +1.0 or, the sum of all the negative and positive deviations from the mean, median and mode is equal to zero (Bajpai & Bajpai, 2014). Nonetheless, the decision-making presumes that if the Asymptotic Significance obtained is more than 0.05, then the data is normally distributed and the converse is true, and hence, the assumption of normality presumed to be violated.

Table 4.16: Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test					
		Risk avoidance	**Risk transfer**	**Risk retention**	**Risk mitigation**
N		293	293	293	293
Normal Parameters[a,b]	Mean	4.2484	3.4016	3.9624	3.6781
	Std. Deviation	.63106	.81226	.58574	.86181
Most Extreme Differences	Absolute	.136	.076	.146	.110
	Positive	.117	.071	.079	.069
	Negative	-.136	-.076	-.146	-.110
Test Statistic		.136	.076	.146	.110
Asymp. Sig. (2-tailed)		.476[c]	.156[c]	.740[c]	.438[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on one sample Kolmogorov-Smirnov normality test shown in table 4.16, values of Asymptotic Significance for risk avoidance, risk transfer, risk retention and risk mitigation were 0.476, 0.156, 0.740 and 0.438 respectively. According to the basic decision making for normality test (Ogwel & Eshiteti, 2022), the Asymptotic Significance values for all predictors in this research study were more than 0.05. Therefore, the conclusion is drawn that the data for risk management strategies (risk avoidance, risk transfer, risk retention and risk mitigation) was distributed normally.

4.6.2 Test for Linearity

A good research study in any regression model should show that there exists a linear relationship between independent and the dependent variables (Zientek, Kim, & Bryn, 2016) . Thus, the linearity test is required in both correlation and regression analysis (Zientek, Kim, & Bryn, 2016). This research study used significance deviation from linearity test to determine if the relationship between risk management strategies and competitiveness of SMEs in Kisumu County was linear or not linear. The test assumed that if the value Significance Deviation from linearity obtained is greater than 0.05, then the relationship between each risk management strategy and competitiveness is linearly dependent. The contrary suggests that this relationship is not linear. Therefore, for each predictor, the linearity test gave the results shown in Table 4.17:

Table 4.17: Test for Linearity

	Risk avoidance * Competitive	Risk transfer* Competitive	Risk retention * Competitive	Risk mitigation * Competitive
Sig. Deviation from Linearity value	0.225	0.396	0.431	0.376

Outputs of linearity test in Tables 4.17show that the value Significance Deviations from linearity of 0.225 for risk avoidance, 0.396 for risk transfer, 0.431 for risk retention and 0.376 for risk mitigation were greater than 0.05. Therefore, a conclusion was drawn that the variables of risk avoidance, risk transfer, risk retention, risk mitigation and competitiveness (dependent variable) were linearly dependent. Hence, the assumption was confirmed. Therefore, the regression analysis was found to be valid and robust to utilize.

4.6.3 Test for Collinearity

Collinearity suggests that two independent variables are very highly correlated that it makes very difficult to determine the contribution of each predictor variable to the variance on the dependent variable (Zientek, Kim, & Bryn, 2016).Multi collinearity reduces one's ability to assess the significance of each predictor variable. In fact, a very high multi collinearity level increases the probability of a good predictor being found to be insignificant in the regression model and thus, it is rejected thereof (Zikmund, Babin, Carr, & Griffin, 2013).

The Variance Inflation Factor (VIF) and its reciprocal, the tolerance values methods were utilized in testing for multi-collinearity. Tolerance shows the percentage of variance in the predictor that can't be accounted for by other independent variables. The threshold suggests the VIF value should either be greater than 10 or not more than 1 to merit a further investigation because such values may show that multi-collinearity could actually be present (Sekaran & Bougie, Research Methods for Business: A Skill Building Approach, 2010). Tolerance values could suggest the presence of multi-collinearity if the values are greater than 1 (Sekaran & Bougie, 2013). Therefore, multi-collinearity test output was presented in Table 4.18:

Table 4.18: Test for Multi-Collinearity

Coefficients[a]								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-.291	.241		-1.207	.228		
	Risk avoidance	.159	.060	.135	2.659	.008	.656	1.525
	Risk transfer	.175	.042	.190	4.213	.000	.822	1.217
	Rik retention	.640	.070	.502	9.084	.000	.549	1.823
	Risk mitigation	.122	.041	.141	2.977	.003	.753	1.328

a. Dependent Variable: Competitiveness

The coefficients for collinearity statistic output indicate that the variance inflation factor (VIF) values were 1.525 for risk avoidance, 1.217 for risk transfer, 1.823 for risk retention and 1.328 for risk mitigation. The tolerance values that were obtained were 0.656, 0.822, 0.549 and 0.753 respectively for the independent variables. Thus, both VIF and tolerance values showed that multi-collinearity was lacking since the VIF values were all less than 10 and not less than 1, while the tolerance values were greater than 0.1 but also less than 1.0.

4.6.4 Test for Auto Correlation

Auto correlation or the independent of the error term, implies that observations are independent from each other (Flick, 2013)and it was tested in this research study by use of the Durbin-Watson test. This test checks whether there is first order serial correlation among residuals of linear regression model (Goundar, Research Methodology and Research Methods, 2019). Durbin- Watsontest value ranges between 0 to 4, and the midpoint of 2 shows that the residuals are not equal(uncorrelated). Therefore, the regression analysis conducted gave Durbin-Watson output values for the respective model summaries as shown in Table 4.19:

Table 4.19: Durbin-Watson Test

Coefficients[a]		
Model	**Durbin-Watson**	**Sig.**
Risk avoidance	1.970	.000
Risk transfer	1.830	.000
Risk retention	1.977	.000
Risk mitigation	1.960	.000

a. Predictors: risk avoidance, risk transfer, risk retention, risk mitigation
a. Dependent Variable: competitiveness

The regression output in table 4.19show the Durbin-Watson test values for risk avoidance (1.970), risk transfer (1.830), risk retention (1.977) and risk mitigation (1.960). All the values shown are above 1.5, and close to 2.0 but less than 2.5. Therefore, it can be inferred that serial correlation is missing in the data variables applied in this research study. Hence, this research study did reject the null hypothesis that stated that errors associated with one predictor variable were not correlated with the errors of any other observation of the study.

4.6.5 Test for Homoscedasticity

Homoscedasticity implies that the variance of errors around the regression line is the same for all the values of the predictors (X) (Zientek, Kim &Bryn, 2016). It means that these variances are homogeneous because the errors of the regression model are distributed identically. On the other hand, heteroscedasticity is the opposite (ppp) and indicates a violation of the homoscedasticity assumption. A marked heteroscedasticity can lead to serious distortion of findings, and hence, seriously weakening the analysis and thus, increasing the possibility of type I error (Taherdoost, 2016). This research study tested for heteroscedasticity presence using Glejser test which developed by Herbert Glejser in 1969 (Haradhan, 2017). This test can very satisfactory if the sample size is large, n> 30 (Bajpai & Bajpai, 2014). This test was carried out by regressing absolud residual value of competitiveness variable with a given regression equation;

$Y = \alpha + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + \varepsilon$

Where Y is competitiveness;

X_1 is risk avoidance

X_2 is risk transfer

X_3 is risk retention

X_4 is risk mitigation

$\beta_1 - \beta_4$ are of predictor variable coefficients'

ε is the error term

α is a constant

A null hypothesis was formulated in order to test for heteroscedasticity as shown,

H_0: the residuals are heteroscedastic. This hypothesis was further tested and results presented in table 4.20:

Table 4.20 shows that the Significance values for risk avoidance variable (0.064), risk transfer variable (0.158), risk retention (0.076) and risk mitigation (0.079) are all greater than 0.05. These values indicated that the multiple regression model was free from problem of heteroscedasticity and that the Glejser test didn't show any violation on the homoscedasticity assumption. Thus, this research study rejected the null hypothesis that did state that the variance of residuals was constant. It therefore inferred that heteroscedasticity was not present among the predictor variables in use.

Table 4.20: Glejser Test for Heteroscedasticity

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	1.462	.145		10.089	.000
	Risk avoidance	-.105	.036	-.206	-2.927	.064
	Risk transfer	-.035	.025	-.089	-1.416	.158
	Risk retention	-.095	.042	-.172	-2.244	.076
	Risk mitigation	-.044	.025	-.116	-1.773	.079

a. Dependent Variable: Absut

4.7 Inferential Statistics

According to Doss , Rayfield, Burris and Lawver (2021) inferential analysis tends to utilize the probability theory to make inference of the characteristics about the given

population from which a given sample is obtained. Hence, inferential analysis concerns itself more with precision and reliability of conclusions drawn from a research study. This section made use of correlation and regression analyses to draw conclusions and meaning from the given data. Correlation analysis was carried out in order to investigate whether there exists a significant association between risk management strategies (predictor variables) and competitiveness of SMEs (dependent variable) in Kenya. Furthermore, regression analysis was carried out to establish the amount of variance that would occur in the dependent variable due to the influence of the independent variable. The results obtained were presented as per the specific objectives.

4.7.1 Correlation Analysis

The study carried out correlation analysis in order to determine the existence of the strength and direction of a linear relationship between risk management strategies sub constructs and competitiveness of SMEs in Kisumu County. Kothari and Garg (2014) opined that correlation coefficient (r) ranges from -1 to +1. A +1-correlation coefficient shows that there is a positive perfect linear correlation between the predictor and the predicted variables. On the contrary, a -1-correlation coefficient shows that the independent variable is negatively and perfectly correlated with the dependent variable. On the other hand, a zero (0) correlation coefficient indicates that the predictor and the predicted variables are linearly independent and hence, the independent variable can't explain the variance in the predicted variable (Cooper & Schindler, 2014). Furthermore, a stronger correlation is obtained when the correlation coefficient (r) is closer to either +1 or -1. Thus, correlation analysis was conducted by use of the Pearson correlation coefficient method. The research study sought to investigate the influence of risk management strategies (risk avoidance, risk transfer, risk retention and risk mitigation) on the predictor variable (competitiveness).

Table 4.21: Correlations Matrix

Correlations							
			1	**2**	**3**	**4**	**5**	**6**
1. Risk avoidance	Pearson Correlation		1					
	Sig. (2-tailed)							
	N		293					
2. Risk transfer	Pearson Correlation		.233**	1				
	Sig. (2-tailed)		.000					
	N		293	293				
3. Risk retention	Pearson Correlation		.585**	.368**	1			
	Sig. (2-tailed)		.000	.000				
	N		293	293	293			
4. Risk mitigation	Pearson Correlation		.302**	.352**	.454**	1		
	Sig. (2-tailed)		.001	.000	.000			
	N		293	293	293	293		
5. Firm size	Pearson Correlation		.309**	.470**	.510**	.577**	1	
	Sig. (2-tailed)		.000	.000	.000	.000		
	N		293	293	293	293	293	
6. Competitiveness	Pearson Correlation		.515**	.456**	.715**	.476*	.599**	1
	Sig. (2-tailed)		.000	.000	.000	.000	.000	
	N		293	293	293	293	293	293

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

*. Correlation is significant at the 0.05 level (2-tailed).

i). Risk Avoidance and Competitiveness

The results obtained in the correlation matrix Table 4.21revealed that the influence of risk avoidance on competitiveness of SMEs in Kisumu County was positive and significant at significant level of 0.01 ($r=0.515^{**}$, $p < 0.01$). These findings were supported by (Oduoza, 2018) who opined that risk avoidance provides an effective way of managing risk in organizations. Consistently, in their study about the influence of supply chain risk avoidance strategies on performance of food and beverage manufacturing firms in Kenya (Nyang'au, 2016), it was also revealed that risk avoidance is significantly correlated with performance, and hence, competitiveness of the organization. Similarly, in a study to find out how risk avoidance strategy influences project performance (Nturau & Mundia, 2019) the findings revealed that the two are significantly and positively correlated.

ii). Risk Transfer and Competitiveness

The findings from Table 4.21 also indicated that risk transfer is positively and significantly associated with competitiveness of SMEs in Kisumu County ($r=0.456^{**}$, $p < 0.01$). These results tend to corroborate previous findings on the likely relationship between risk transfer strategy and organizational competitiveness(Vienna Initiative Working Group, 2014). According to (Vienna Initiative Working Group, 2014) report on the Credit Guarantee Schemes for SME lending in Central, Eastern and South-Eastern Europe, it was found that joint loan guarantee contracts and mutual guarantee contracts among SMEs form the basis of SME guarantee networks. However, expansion of these networks tends to increase the fragility of financial systems because of regional and industrial risk contagion that is usually embedded within them. Consequently, Fang (2016) studied on the Risk of SMEs' financial outsourcing in China and the competitiveness of these firms. The findings revealed a direct relationship between the two variables. Fang's study explores the relationship between financial outsourcing, which is a form of risk transfer, and the competitiveness of SMEs in China. The findings reveal a direct and positive relationship between these variables, supporting the notion that risk transfer strategies enhance SME competitiveness. These studies corroborate the results presented in Table 4.21 of your

study, highlighting the positive and significant relationship between risk transfer strategies and the competitiveness of SMEs.

iii). Risk Retention strategy and Competitiveness

The results of the correlation matrix Table 4.21 revealed that the influence of risk retention strategy on competitiveness of SMEs in Kisumu County was positive and significant at 99 per cent confidence level ($r=0.715^{**}$, $p < 0.01$). Consistent with these findings, Morrison (2014) argued that behavioral engagement has a positive influence on employees' performance in crafting type of work.

iv). Risk Mitigation Strategy and Competitiveness

The findings in Table 4.21 indicated that the association between risk mitigation and the competitiveness is positive and significant. That is, the correlation coefficient (R) obtained between risk mitigation and competitiveness is $r=0.476^{**}$ at $p< 0.01$. Thus, the results obtained in Table 4.21 suggested that an increase in risk mitigation strategy will lead to the automatic increase in the competitiveness of the various SMEs in Kisumu County. Therefore, this study can draw the conclusion that risk mitigation strategy has a positive and significant influence on competitiveness of the firm. These results corroborate earlier. These results are supported by Wang, Shi, and Zhu (2015). This paper examines how risk management practices, including risk mitigation strategies, affect the performance and competitiveness of SMEs in China. The study finds a significant positive correlation between effective risk management and enhanced firm competitiveness.

4.7.2 Regression Analysis

This study further carried out a regression analysis by fitting the linear regression models for the data. Regression analysis was carried out for each of the predictor variables on competitiveness of SMEs in Kisumu County. This was purposely conducted in order to investigate the amount of influence that the predictor variables had on the dependent variable. It also helped the study to establish the nature of the

relationship between risk management strategies and competitiveness. The results obtained were presented and discussed as per the specific variables.

i) Regression of Risk Avoidance and Competitiveness

To test the amount of variation of independent variable (risk avoidance) on the predicted variable (competitiveness) a regression analysis was carried out. In view of the results in Table 4.21, it was found that risk avoidance has a positive and significant influence on competitiveness of the SMEs in Kisumu County ($r=0.515^{**}$, $p < 0.01$). Thus, in order to establish the specific influence, risk avoidance (predictor variable 1) was regressed with competitiveness and the results presented in Tables 4.22, and interpreted thereof;

Table 4.22: Risk Avoidance on Competitiveness

Model Summary							
				Std. Error	Change Statistics		
Model	R	R Square	Adjusted R Square	of the Estimate	R Square Change	F Change	Sig. F Change
1	.515[a]	.266	.263	.64068	.266	91.187	.000

a. Predictors: (Constant), Risk Avoidance

The results in the Table 4.22 shows the amount of variation on the predicted variable (competitiveness) as explained by the predictor variable (risk avoidance). The results from the regression analysis yielded a coefficient of R value of 0.515 and $R^2 = 0.266$. This means that 26.6 per cent of the corresponding variation in competitiveness of SMEs in Kisumu County could be explained by risk avoidance strategy. Furthermore, the results obtained in Table 4.22 gave an F test value of 91.187, $p < 0.01$. This value was adequate to support the goodness of fit of the regression model explaining the variation in competitiveness. Therefore, this confirms the usefulness of risk avoidance as an independent variable on the competitiveness of SMEs. Hence, the findings in Table 4.22 revealed that there is a positive and significant correlation between Risk avoidance and competitiveness.

The results are supported by Anderson, Jones, and Smith (2017) study on Risk Management and Organizational Performance: A Comparative Analysis between

SMEs and Large Companies. The research analyzed how different risk management strategies, including risk avoidance, impact the performance and competitiveness of both SMEs and large companies across various sectors. The findings indicated that SMEs that effectively implement risk avoidance strategies experience a significant increase in their competitiveness.

Table 4.23: Risk Avoidance Coefficient's

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	1.374	.274		5.012	.000
	Risk avoidance	.610	.064	.515	9.549	.000

a. Dependent Variable: Competitiveness

Similarly, the unstandardized coefficients β value of the computed scores of risk avoidance strategy was 0.515 with a t-value of 9.549 and at $p < 0.05$. Since the t-value > +1.96, the estimated regression model obtained in table 4.23 is therefore significant and feasible. Further, with a $p < 0.05$ it implies that for every 5 per cent increase in risk avoidance strategy there was a predicted increase in the percentage of competitiveness of zero. Thus, having achieved the set objective, this study rejected the null hypothesis stating that; H_{01}: risk avoidance strategy *has no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

ii) Regression of Risk Transfer and Competitiveness

Furthermore, in order to test the amount of variation of the second independent variable (risk transfer) on competitiveness (predicted variable) a regression analysis was conducted. The results in Table 4.21 indicate that risk transfer has a positive and significant influence on competitiveness of the SMEs in Kisumu County (r=0.456**, $p < 0.01$). Hence, to establish the specific nature of influence, risk transfer (predictor variable 2) was regressed with competitiveness and the results presented in Table 4.24, and interpreted thereof;

Table 4.24: Risk Transfer and Competitiveness

Model Summary							
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**		
					R Square Change	**F Change**	**Sig. F Change**
1	.456[a]	.208	.205	.66546	.208	66.110	.000

a. Predictors: (Constant), Risk Transfer

The findings obtained in the Table 4.24 shows the quantity of variance on competitiveness (predicted variable) as explained by risk transfer (predictor variable). The regression analysis results gave a coefficient of R value of 0.456 and R^2 =0.208. This implies that 20.8 per cent of the corresponding variation in competitiveness of SMEs in Kisumu County could be explained by the risk transfer strategy. Furthermore, the results obtained in Table 4.24 gave an F test value of 91.187, $p < 0.01$. This value is sufficient to support the goodness of fit of the regression model that explains the variation in competitiveness. Hence, this confirms that risk transfer is useful predictor of competitiveness of the SMEs in Kisumu County. Therefore, the findings in Table 4.24show that there is a positive and significant relationship between Risk transfer strategy and competitiveness.

Table 4.25: Risk Transfer Coefficient's

Coefficients[a]						
		Unstandardized Coefficients		**Standardized Coefficients**		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	2.539	.180		14.096	.000
	Risk transfer	.419	.052	.456	8.131	.000

a. Dependent Variable: Competitiveness

Further, the unstandardized coefficients β value of the computed scores of risk transfer strategy was 0.456 with a t-value of 8.131and at $p < 0.05$. Since the t-value is greater than +1.96, the estimated regression model obtained in Table 4.25 is significant and applicable. Similarly, with a $p < 0.05$ it implies that for every 5 per cent increase in risk transfer strategy there was a predicted increase in the percentage of competitiveness of zero. Therefore, having achieved the objective set, this research

study rejected the null hypothesis stating that; H_{01}: risk transfer strategy *has no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

iii) Regression of Risk Retention and Competitiveness

Equally, in order to test the amount of variation of the independent variable (risk retention) on the predicted variable (competitiveness) a regression analysis was also carried out. In relation to the results in Table 4.21, it was established that risk retention has a positive and significant influence on competitiveness of the SMEs in Kisumu County ($r=0.715^{**}$, $p < 0.01$). Thus, in order to establish the specific influence, risk retention (predictor variable 3) was regressed with competitiveness and the results presented in Tables 4.26, and interpreted thereof;

Table 4.26: Risk Retention and Competitiveness

Model Summary						
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**		
				R Square Change	**F Change**	**Sig. F Change**
.715[a]	.511	.509	.52281	.511	263.390	.000

a. Predictors: (Constant), risk retention

The results in the Table 4.26 shows the amount of variation on the dependent variable (competitiveness) as explained by the independent variable (risk retention). These results obtained from the regression analysis gave a coefficient of R value of 0.715 and R^2 =0.511. This implies that 51.1 per cent of the corresponding variation in competitiveness of SMEs in Kisumu County could be explained by risk retention strategy. Further, the results obtained in Table 4.26also gave an F test value of 263.390, $p < 0.01$. This value was large enough to support the goodness of fit of the regression model that explains the variation in competitiveness. Therefore, this also confirms the usefulness of risk retention as a predictor variable on competitiveness of SMEs. Hence, the findings in Table 4.26 revealed that there is a positive and significant correlation between Risk retention strategy and competitiveness.

Table 4.27: Risk Retention Coefficient's

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.355	.225		1.579	.116
	Risk retention	.911	.056	.715	16.229	.000

a. Dependent Variable: Competitiveness

In addition, the unstandardized coefficients β value of the computed scores of risk retention strategy was 0.715with a t-value of 16.229and at $p < 0.05$. Since the t-value is greater than +1.96, the estimated regression model obtained in Table 4.27 is significant and applicable. Similarly, with a $p < 0.05$ it also implies that for every 5 per cent increase in risk retention strategy there was a predicted increase in the percentage of competitiveness of zero. Therefore, having achieved the objective set, this research study rejected the null hypothesis stating that; H_{01}: risk retention strategy *has no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

iv) Regression of Risk Mitigation and Competitiveness

Similarly, to test the amount of variation of the fourth predictor variable (risk mitigation) on competitiveness (dependent variable) a regression analysis was conducted. The results in Table 4.21 revealed that risk mitigation has a positive and significant influence on competitiveness of the SMEs in Kisumu County (r=0.476**, $p < 0.01$). Hence, to establish the specific nature of influence, risk mitigation (predictor variable 4) was regressed with competitiveness and the results presented in Table 4.28, and interpreted thereof;

Table 4.28: Risk Mitigation and Competitiveness

Model Summary[b]							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
1	.476[a]	.227	.224	.65750	.227	73.856	.000

a. Predictors: (Constant), Risk Mitigation
b. Dependent Variable: Competitiveness

The results in Table 4.28 shows the amount of variance on competitiveness (predicted variable) as explained by risk mitigation (predictor variable). This regression analysis results gave a coefficient of R value of 0.476 and R^2 =0.227. This implies that 22.7 per cent of the corresponding variation in competitiveness of SMEs in Kisumu County could be explained by risk mitigation strategy. Furthermore, the results obtained in Table 4.28 gave an F test value of 73.856, $p < 0.01$. This value is large enough to support the goodness of fit of the regression model explaining the variation in competitiveness. Hence, this also confirms that risk mitigation is useful predictor of competitiveness. Therefore, the findings in Table 4.28also show that there is a positive and significant relationship between Risk mitigation strategy and competitiveness.

Table 4.29: Risk Mitigation Coefficients

Coefficients[a]						
		Unstandardized Coefficients		**Standardized Coefficients**		
Model		**B**	**Std. Error**	**Beta**	t	Sig.
1	(Constant)	2.447	.181		13.507	.000
	Risk mitigation	.412	.048	.476	8.594	.000

a. Dependent Variable: Competitiveness

Further, the unstandardized coefficients β value of the computed scores of risk mitigation strategy was 0.476 with a t-value of 8.594and at $p < 0.05$. Since the t-value is greater than +1.96, the estimated regression model obtained in Table 4.29 is significant and applicable. Similarly, with a $p < 0.05$ it implies that for every 5 per cent increase in risk mitigation strategy there was a predicted increase in the percentage of competitiveness of zero. Therefore, having achieved the objectiveset, this research study rejected the null hypothesis stating that; H_{01}: risk mitigation strategy *has no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

v) Regression of risk management strategies and competitiveness

The main objective for this research study was to investigate the influence of risk management strategies on competitiveness of SMEs in Kenya. To establish the specific nature of the influence, risk management strategies (risk avoidance, risk transfer, risk retention and risk mitigation) were jointly regressed as independent variables with

competitiveness and the results obtained presented in Tables 4.30 and interpreted thereof;

Table 4.30: Risk Management Strategies and Competitiveness

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.763[a]	.582	.575	.48618	.582	86.745	.000

a. Predictors: (Constant), risk mitigation, risk avoidance, risk transfer, risk retention
b. Dependent Variable: competitiveness

Table 4.30 presents the amount of variance on the predicted variable (competitiveness) as explained by the composite predictor variables (risk avoidance, risk transfer, risk retention and risk mitigation). The regression analysis conducted gave rise to the coefficient R value of 0.763 and the R^2 of 0.582, which implies that 58.2 per cent of the corresponding variation in competitiveness can be explained by all the risk management strategies used in the study. Furthermore, the adjusted R square (.575) also attempts to give a more honest value that tends to estimate the R square for the entire population at 57.5 per cent. Other variables not used in this study and regression model could possibly explain the rest of the variance. Similarly, the F change value of (86.745, $p < 0.001$), was large enough to support the goodness of fit of the model in explaining the variation in competitiveness by risk management strategies. It also shows that with a p value of less than 0.001, there is less than 1 in 1000 chances that the influence of risk management strategies on competitiveness could be described by a flat line. These findings corroborate those of previous ones.

Table 4.31: Risk Management Strategies Coefficient's

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	-.293	.241		-1.207	.228
	Risk avoidance	.169	.060	.135	2.669	.007
	Risk transfer	.176	.042	.190	4.243	.000
	Risk retention	.641	.070	.502	9.082	.000
	Risk mitigation	.123	.041	.141	2.978	.002

a. Dependent Variable: Competitiveness

The findings obtained in Table 4.31 show the unstandardized coefficients β values of the computed (composite index) scores of risk management strategies as 0.159 (risk avoidance), 0.175 (risk transfer), 0.640 (risk retention) and 0.122 (risk mitigation). These coefficients showed the fitted model with the inclusion of the constant (beta zero). Hence, the estimated regression model shown as:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ and thus, the estimated model was given by:

Competitiveness (predicted) = -0.293+ 0.169×risk avoidance + 0.176× risk transfer + 0.641×risk retention + 0.123×risk mitigation

According to Cohen and Cohen (1983), the *t*- values should either be less than -1.96 or greater than +1.96 in order to show the usefulness of the predictor variables on dependent variable. Thus, a large t-value on either side with a smaller p-value suggest that the predictor contributes adequately to the dependent variable and hence, the regression model supported can be said to be fit and applicable. Accordingly, the obtained results in Table 4.31show*t*-values of risk avoidance (t= 2.669), risk transfer (t= 4.243), risk retention (t= 9.082) and risk mitigation (2.978). This showed that all the *t*-values were within the range and hence, the variables were found to be significant predictors of competitiveness since they all had p values of less than 0.01. Equally, this also indicates that when a given set of risk management strategies are increased, then subsequently, there will be an increase in the competitiveness of the various SMEs by the *t*- values shown respectively. Hence, having achieved the main objectiveset, this research study rejected the null hypothesis that stated: H_0: Risk management

strategies *have no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

4.8 Moderation Relationship

This research study also sought to investigate the moderating influence of firm size on the relationship between risk management strategies and competitiveness of SMEs in Kisumu County. In order to test for the moderating influence, a hierarchical regression analysis was carried out. However, before hierarchical regression analysis was conducted, the predictor variables (risk avoidance, risk transfer, risk retention and risk mitigation) and the moderating (firm size) standardized or mean centered. On the other hand, the dependent variable (competitiveness) was kept raw. According to Chauhan, Ghosh, Rai and Kapoor (2017) standardizing of the predictor variables and the moderating one tend to reduce multi-collinearity risk during the analysis. This ensures that the Variance Inflation Factor (VIF) scores are all below 10.0 (Chauhan, Ghosh, Rai, & Kapoor, 2017).The standardized independent variables were then multiplied by the standardized moderating variable in order to create four interaction terms. Thereafter, a series of multiple regression analysis was conducted using the standardized predictor and moderating values against the competitiveness (hierarchical regression). This analysis first sought to establish the influence of control variables (job category, age, education level and length of service) on the competitiveness (competitiveness) as shown in Table 4.32, followed by a series of other steps. After conducting hierarchical regression, interaction plots were generated to check whether indeed there was interaction between variables at various levels of moderation. Finally, step wise regression analysis was also carried out in order to determine the incremental contribution of each independent variable on the variance in the dependent variable.

4.8.1 Hierarchical Regression Analysis

In step one, the three individual demographic variables of gender, length of trading, and education level were entered into the regression model as control variables. Controlling for specific variables is important since some of them have been found to influence certain outcomes (Kothari & Garg, 2014). In step two, all the standardized

independent variables were added into the regression model. Similarly, I the third step, the standardized moderating variable (firm size) was also added to generate model 3. Finally, the fourth step involved an entry of all the interaction terms to obtain model 4. The model summary for the hierarchical regression carried out was presented in Table 4.32 shown:

Table 4.32: Hierarchical Regression Model

Model Summary							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
1	.141[a]	.019	.005	.74449	.019	1.288	.275
2	.775[b]	.601	.589	.47838	.582	89.517	.000
3	.797[c]	.636	.623	.45797	.035	23.328	.000
4	.828[d]	.686	.669	.42900	.050	9.519	.000

a. Predictors: (Constant), Education level, gender, Length of trading
b. Predictors: (Constant), Education level, gender, Length of trading, risk retention, risk transfer, risk mitigation, risk avoidance
c. Predictors: (Constant), Education level, gender, Length of trading, risk retention, risk transfer, risk mitigation, risk avoidance, Firm size
d. Predictors: (Constant), Education level, gender, Length of trading, risk retention, risk transfer, risk mitigation, risk avoidance, Firm size, risk mitigation * Firm size, risk avoidance *Firm size, risk transfer * Firm size, risk retention * Firm size

The results in Table 4.32 shows that cumulatively, all demographic variables used as control variables were found to be positive, weak but also insignificantly associated with competitiveness (r=141, p>0.05). This revealed that the control variables (education level, gender and length of trading) were positively correlated to competitiveness with the R^2 of 0.019, p>0.05. This implies that model 1 could only explain 1.9 per cent of variance in the dependent variable (competitiveness). Therefore, from this analysis the model was found to be unfit and not applicable.

In addition, when the standardized z scores of four predictor variables (risk avoidance, risk transfer, risk retention and risk mitigation) were added to model 1, model 2 was obtained as shown in Table 4.32. Similarly, all the four independent variables were jointly found to have a positive and significant influence on competitiveness (r=0.775, $p < 0.01$). The coefficient of determination, R^2 of 0.601, at $p < 0.01$ was obtained in

this model. This showed that model 2 could explain 60.1 per cent of variance in the dependent variable (competitiveness) with an incremental variance of 0.585 or 58.5 per cent increase from model 1. These findings supported the hypothesis that risk management strategies have a positive and significant influence on competitiveness of SMEs in Kisumu County in Kenya. Therefore, this model was found to be statistically significant and applicable.

The findings from Table 4.32 also showed that when firm size was added as a moderating variable, the results (in model 3) indicated that together, independent and moderating variables were significantly and jointly related to competitiveness ($r = 0.797$, $p < 0.01$). That is to say that when all the demographic variables were controlled, the relationship between risk management strategies and competitiveness was found to be positive and statistically significant. Table 4.32 indicates that the R^2 by from .601 to .636. This also implies that model 3 could explain 63.6 per cent of variance in competitiveness, giving an increment of 3.5 per cent in variance from 60.1 per cent to 63.6 per cent.

Finally, to investigate how the firm size moderates the relationship between risk management strategies and competitiveness of SMEs in Kisumu County in Kenya, interaction terms of the standardized independent variables (risk avoidance, risk transfer, risk retention and risk mitigation) and the standardized moderating variable (firm size) were entered into the regression model for model 4 to be generated. As predicted by fourth hypothesis, firm size was found to have a positive moderating influence on the relationship between risk management strategies and competitiveness ($r = 0.828$, and $R^2 = 0.686$). Therefore, this model was found to be significant and applicable give that the p-value was less than 0.01. Similarly, hierarchical regression results revealed that when the interaction terms were added the influence of risk management strategies on competitiveness increased by 0.05 or rather 5 per cent.

Accordingly, Table 4.32 findings show that, the R^2 value of .686 imply that risk management strategies could explain 68.6 per cent of variance in competitiveness as at model 4. Nonetheless, hierarchical regression analysis enables one to see if a variable of interest (firm size) can explain a statistically significant amount of variance

in competitiveness (Dependent Variable) after accounting for all other variables (Antwi & Hamza, 2015). This can be observed in the unstandardized coefficient Table 4.33.

Table 4.33: Unstandardized Coefficients (Hierarchical)

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
Step 1:						
1	(Constant)	3.963	.047		84.844	.000
	Age	.026	.060	.035	.443	.658
	Education level	-.067	.053	-.090	-1.269	.206
	Length of service	.006	.061	.008	.093	.926
	Job category	-.092	.062	-.124	-1.498	.135
R=0.141, R^2 = 0.019, ΔR^2 =0.020, FΔ (3, 290) =1.2888, P = 0.275						
Step 2						
2	(Constant)	3.963	.030		132.040	.000
	Risk avoidance	.107	.039	.144	2.767	.006
	Risk transfer	.134	.036	.179	3.666	.000
	Risk retention	.402	.044	.539	9.155	.000
	Risk mitigation	.073	.038	.098	1.932	.054
R=0.775, R^2 = 0.601, ΔR^2 =0.582, FΔ (4, 286) =89.517, P = 0.000						
Step 3						
3	(Constant)	3.963	.029		137.926	.000
	Firm size	.196	.041	.263	4.830	.000
R=0.797, R^2 = 0.636, ΔR^2 =0.035, FΔ (1, 285) =23.328, P = 0.000						
Step 4						
4	(Constant)	4.033	.031		131.603	.000
	Risk avoidance * Firm size	-.041	.037	-.055	-1.069	.286
	Risk transfer* Firm size	-.132	.037	-.209	-3.650	.000
	Risk retention * Firm size	.053	.039	.085	1.321	.188
	Risk mitigation * Firm size	-.037	.046	-.054	-.790	.430
R=0.828, R^2 = 0.686, ΔR^2 =0.050, FΔ (4, 281) =9.519, P = 0.000						

a. Dependent Variable: Competitiveness

The findings from Table 4.33 showed the output of unstandardized coefficients of a hierarchical regression. Model 1 in Table 4.33 indicated that the relationship between all three control variables and competitiveness was not significant (gender, education level and length of trading). However, a substantial change in the variance on competitiveness occurred when the predictor variables (risk avoidance, risk transfer, risk retention and risk mitigation) were added to obtain model 2. With a variance 58.5 per cent this model was found to be significant since $p < 0.01$. it could explain a variance of 60.1 per cent in competitiveness of SMEs in Kisumu County in Kenya. On addition of the standardized scores of firm size variable on model 2, R squared changed from 60.1 per cent to 63.6 pr cent in the predicted variable (competitiveness). This change was also found to be positive and significant ($p < 0.01$).

Similarly, Table 4.33 indicates that in model 4the coefficient values of the composite index with the standardized scores of risk management strategies were all significant even under controlled conditions. On the contrary, all the interaction terms gave a non-significance value ($p > 0.05$) except for risk transfer × firm size with competitiveness. However, the coefficients obtained can still be interpreted given that some of the predictors were significant. Thus, from the results in Table 4.33, a hierarchical multiple regression model is stated as shown:

$$Y = 4.034 + 0.143\ X_1 + 0.071\ X_2 + 0.319X_3 + 0.016X_4 + 0.199Z - 0.041\ X_1 * Z - 0.132X_2 * Z + 0.053X_3 * Z - 0.037X_4 * Z \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{II a}$$

or

Competitiveness = 4.034 + 0.143risk avoidance+ 0.071 risk transfer + 0.319 risk retention + 0.016risk mitigation + 0.199 firm size- 0.041 risk avoidance × firm size– 0.132risk transfer × firm size+ 0.053risk retention× firm size -0.037 risk mitigation × firm size ……..... II a

However, in order to interpret how firm size moderate the relationship between risk management strategies and competitiveness, the regression models were calculated for each variable relationship at high and low levels of firm size. These regressions were then run-on standardized terms using the process model 1 method which was advanced

by Hayes F. Andrew (Dawson, 2014). The values obtained showing interaction effects between the predictors (risk avoidance, risk transfer, risk retention and risk mitigation) and the moderating variable (firm size) were then plotted on an interaction plot excel file in order to help in the interpretation of the interactions. From the plotted graphs, the rule of the thumb is that, non-parallel lines indicate an interaction, such that the more parallel the lines, the greater the non-interaction. The resulting graphs are presented in Figures 4.18, 4.19, 4.20 and 4.21 respectively.

The results in Table 4.18 show that the interaction effect of firm size on the relationship between risk avoidance strategy and competitiveness was significant. However, the association between risk avoidance strategy and competitiveness (predicted variable) was dependent on the size of the firm under study. Thus, the nature of moderation influence on the relationship between risk avoidance and competitiveness is presented in Figure 4.18.

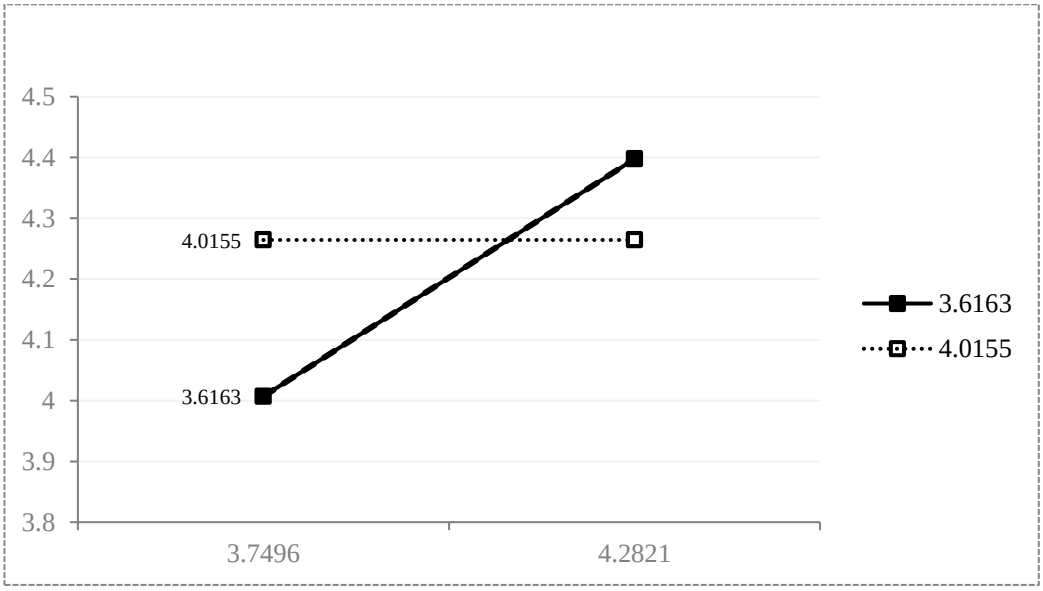

Figure 4.18: Risk Avoidance and Firm Size Interaction Plot

The findings shown in Figure 4.18indicate that when the level of firm size was high, then the relationship between risk avoidance strategy and competitiveness was relatively high. In contrast, when the level of the firm size was low, risk avoidance strategy was found to have a positive influence on competitiveness of the firm. Thus,

firm size was found to have a moderating influence on the relationship between risk avoidance and competitiveness of SMEs in Kisumu County in Kenya.

Similarly, Table 4.33 showed the interaction effect of firm size between risk transfer strategy and competitiveness (β = -0209, p< 0.01). This also show that the association between risk transfer strategy and competitiveness was contingent on the level of firm size understudy. Nonetheless, the nature of the moderating influence is presented in Figure 4.19:

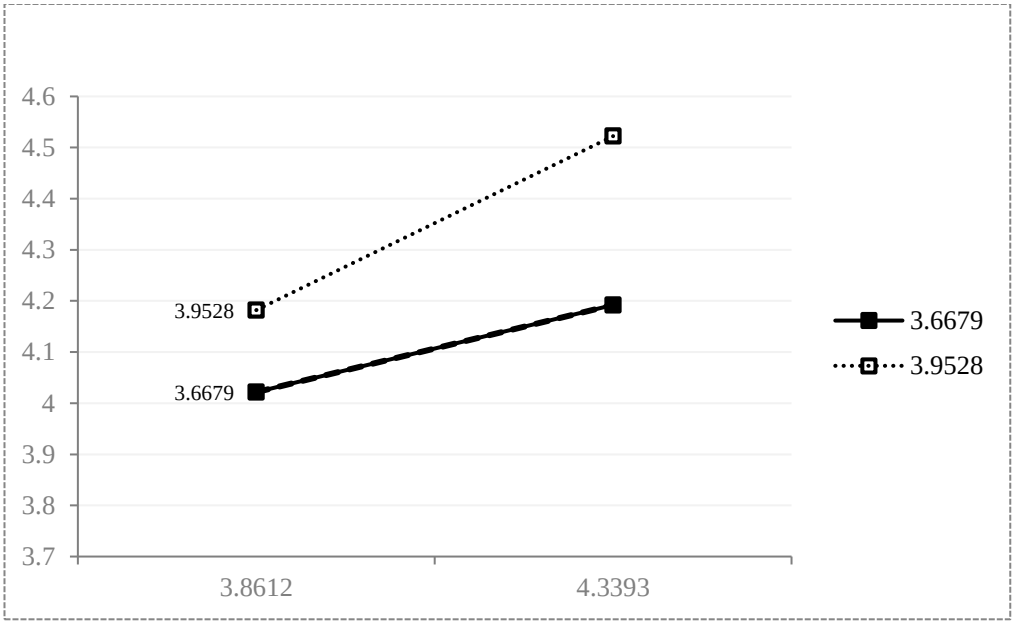

Figure 4.19: Risk Transfer and Firm Size Interaction Plot

The results Figure 4.19 show that when the level of firm size is high, the relationship between risk transfer strategy and competitiveness is also high. However, when the level of firm size was low, then risk transfer strategy was found to have a positive influence on competitiveness. Thus, firm size has a moderating influence on the relationship between risk transfer and competitiveness of SMEs in Kisumu County in Kenya.

Further, Table 4.33 showed the interaction effect of firm size between risk retention strategy and competitiveness (β = 0.085, p< 0.01). Additionally, it also indicates that

the association between risk retention strategy and competitiveness is contingent on the level of firm size. The nature of the moderation influence was presented in Figure 4.20:

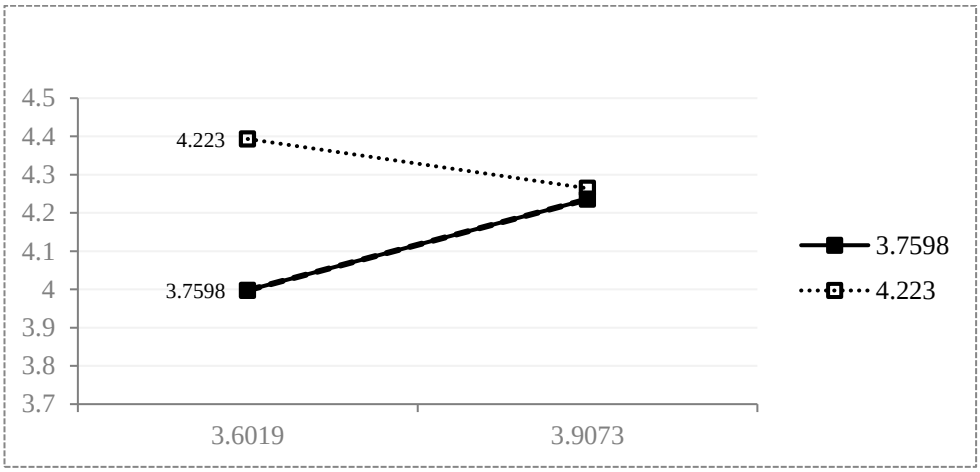

Figure 4.20: Risk Retention and Firm Size Interaction Plot

The results in Figure 4.20 revealed that when firm size is high, then the relationship between risk retention strategy and competitiveness is relatively high. However, when firm size is low, then risk retention strategy was also found to have a positive influence on competitiveness. Therefore, firm size has a moderating influence on the relationship between risk retention strategy and competitiveness of SMEs in Kisumu County in Kenya.

In addition, Table 4.33 showed the interaction influence of firm size between risk mitigation strategy and competitiveness ($\beta = -0.054$, $p < 0.001$). This also indicated that the association between risk mitigation and competitiveness was contingent on the level of firm size. In effect, the nature of this moderating influence was further presented in Figure 4.21:

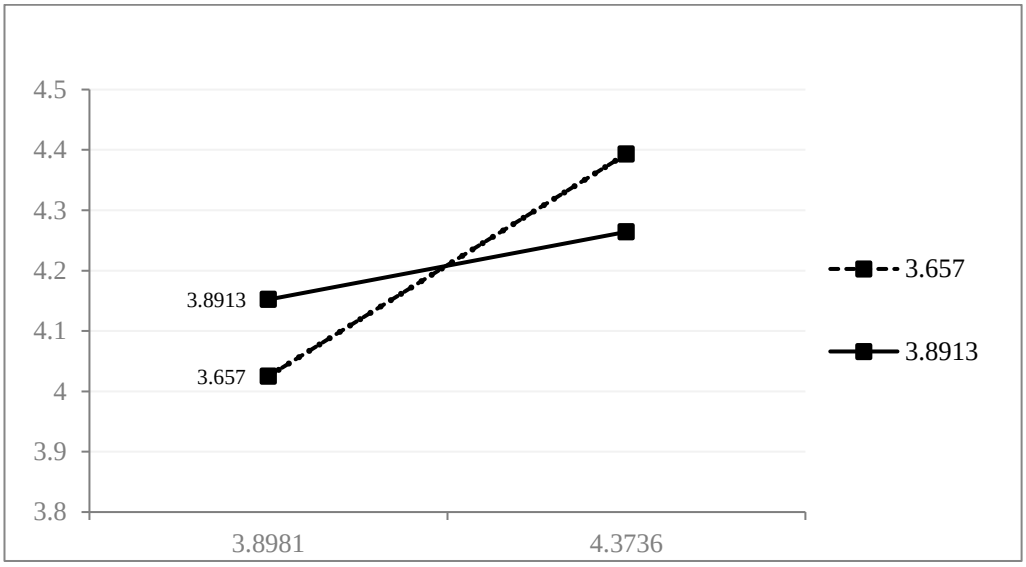

Figure 4.21: Risk Mitigation and Firm Size Interaction Plot

The results in Figure 4.21 indicated that when the level of firm size is high, then the relationship between risk mitigation strategy and competitiveness was relatively high. However, when the level of firm size is low, then risk mitigation strategy was found to have a slight influence on competitiveness of SMEs in Kisumu County. Therefore, firm size was found to have a moderating influence on the relationship between risk mitigation and competitiveness in Kenya. Hence, the hypothesis that firm size has a moderating influence on the relationship between risk mitigation strategy and competitiveness of SMEs in Kisumu County, was supported.

Table 4.34: Firm Size (Stepwise Regression)

Model Summary							
			Adjusted	Std. Error	Change Statistics		
Model	R	R Square	R Square	of the Estimate	R Square Change	F Change	Sig. F Change
1	.715[a]	.510	.508	.52281	.511	261.390	.000
2	.744[b]	.554	.551	.50022	.043	24.267	.000
3	.755[c]	.570	.565	.49205	.016	9.413	.002
4	.763[d]	.582	.575	.48618	.012	7.073	.008
5	.783[e]	.614	.606	.46837	.032	20.289	.000
6	.804[f]	.647	.639	.44856	.033	23.396	.000

a. Predictors: (Constant), risk retention
b. Predictors: (Constant), risk retention, risk transfer
c. Predictors: (Constant), risk retention, risk transfer, risk mitigation
d. Predictors: (Constant), risk retention, risk transfer, risk mitigation, risk avoidance
e. Predictors: (Constant), risk retention, risk transfer, risk mitigation, risk avoidance, firm size
f. Predictors: (Constant), risk retention, risk transfer, risk mitigation, risk avoidance, firm size, risk transfer * firm size

4.8.2 Stepwise Regression Analysis

In the second multiple regression model, firm size was further treated as a moderator and stepwise regression performed to find out its incremental contribution on the relationship between risk management strategies and competitiveness. Further, the analysis was done to establish which of the predictor variables (between risk avoidance, risk transfer, risk retention and risk mitigation) may have had the weakest contribution on the variance in competitiveness. The results were presented in Table 4.34

The standard step-wise regression output is shown in Table 4.34 with six models. In model 1, risk retention seems to have been entered first, probably due to the fact that it had the highest influence to the variance in competitiveness (see Table 4.26). From the onset, the control variables got removed from the model because of they had an insignificant contribution towards the dependent variable. Thus, model 1 consisted of the constant and risk retention. Statistics in Table 4.34 indicate that R^2 for the first was 0.510, which suggests that at this point, risk retention could explain 51.0 per cent of variance in competitiveness. With a p-value < 0.01, the model was found significant at 99 per cent confidence level. Furthermore, the F change statistic of 261.390 did

indicate that this model is significant at a significance level of 0.01. Hence, this model is fit and applicable.

Further, model 2 added risk transfer to model 1, increasing the influence on competitiveness to 55.4 per cent, an increase of 4.4 per cent in variance to the dependent variable, and at a p value of 0.000 which is less than 0.01. Therefore, the second model was found to be significant and applicable because the F change statistic obtained was also significant ($\Delta F=24.267$, $p < 0.01$). Similarly, the third model was obtained by adding risk mitigation on the variables in model 2. This increased the R^2 value from 0.554 to 0.570. Accordingly, this implied that putting together risk retention, risk transfer and risk mitigation strategies could explain 57.0 per cent of variance in competitiveness of SMEs in Kisumu County. This model was also significant with a p value = 0.002 still at 99 per cent confidence level. Basing on the F change ($\Delta F=9.413$, $p < 0.01$) statistic in table 4.34, model 3 was found to be fit and applicable.

Similarly, the fourth model was generated by the addition of risk avoidance variable on to the third model. This increased the R^2 value with 0.012 units (1.2 per cent) to 0.582. This meant that jointly, these four predictors could now predict 58.2 per cent of variance in the predicted variable (competitiveness). Likewise, the model was found to be significant at p value= 0.000, while the F change statistic of 7.073 showed that this model was fit and applicable. Equally, firm size variable was added onto the fourth model to generate model 5. This also increased the explanation of variance in competitiveness by the fifth model 5 to 61.4 per cent at p value of 0.000 which was less than 0.01. Basing on the F change values ($\Delta F=20.289$, $p < 0.01$), this model was found to be significant and applicable.

Finally, one interaction term (risk transfer * firm size) was added to model 5, giving the sixth model. The addition increased the R^2 value with 0.033 units (3.3 per cent) to 0.647. This meant that model six alone could now explain 64.7 per cent of variance in competitiveness. The rest could be explained by other variables not in the model. However, at this point, three interaction terms of risk avoidance × firm size, risk retention × firm size, and risk mitigation × firm size got removed from the model

summary of the step wise regression. Consequently, the three were dropped and then step-wise regression analysis repeated. Consistently, similar results were achieved as those in table 4.34. According to Saunders, Lewis, & Thornhill (2012) step wise regression analysis does multiple regression many times and at every time removes the weakest correlated predictor variable. Nonetheless, overall, firm size was also found to have a significant moderating influence on the relationship between risk management strategies and competitiveness of SMEs in Kisumu County in Kenya. However, the unstandardized coefficients produced can be summarized as shown in the Table 4.35:

Table 4.35: Unstandardized Coefficients of Step-Wise Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	3.963	.033		120.821	.000
	Risk retention	.533	.033	.715	16.229	.000
2	(Constant)	3.963	.031		126.276	.000
	Risk retention	.472	.034	.633	13.963	.000
	Risk transfer	.167	.034	.223	4.926	.000
3	(Constant)	3.963	.031		128.374	.000
	Risk retention	.431	.036	.578	12.032	.000
	Risk transfer	.143	.034	.192	4.196	.000
	Risk mitigation	.109	.036	.146	3.068	.002
4	(Constant)	3.963	.031		129.924	.000
	Risk retention	.375	.041	.502	9.084	.000
	Risk transfer	.142	.034	.190	4.213	.000
	Risk mitigation	.105	.035	.141	2.977	.003
	Risk avoidance	.100	.038	.135	2.659	.008
5	(Constant)	3.963	.029		134.863	.000
	Risk retention	.329	.041	.440	8.004	.000
	Risk transfer	.098	.034	.131	2.881	.004
	Risk mitigation	.036	.037	.049	.979	.329
	Risk avoidance	.103	.036	.138	2.824	.005
	Firm size	.181	.040	.242	4.504	.000
6	(Constant)	4.019	.030		132.251	.000
	Risk retention	.308	.040	.413	7.786	.000
	Risk transfer	.092	.033	.124	2.840	.005
	Risk mitigation	.040	.036	.054	1.986	.008
	Risk avoidance	.121	.035	.163	3.461	.001
	Firm size	.169	.038	.226	4.385	.000
	Risk transfer*Firm size	-.118	.024	-.186	-4.837	.000

a. Dependent Variable: Competitiveness

The Unstandardized coefficients β values of the composite index of risk management strategies and competitiveness, when moderated with firm size as shown in model 6 were 0.308 (risk retention), 0.092 (risk transfer), 0.040(risk mitigation), 0.121(risk avoidance), 0.169(firm size) and -118(risk transfer × firm size), with t-test values of7.786 (risk retention), 2.840 (risk transfer), 1.986 (risk mitigation), 3.461(risk avoidance), 4.385(firm size) and -4.837(risk transfer × firm size). Hence, all t-values were greater than +1.96 or less than -1.96. All the p values were also less than 0.01. They all indicated that there is a significant relationship at 99 per cent confidence level. Therefore, all the risk management strategies in this research study had a statistically significant influence on competitiveness. However, table 4.35 showed that firm size had a significant moderating influence on the relationship between risk management strategies and competitiveness. Having achieved the set objective, this research study rejected the null hypothesis that: H_0: firm size *has no moderating significant influence on the relationship between risk management strategies and competitiveness of the SMEs in Kisumu County in Kenya.*

From the results in table 4.35, the revised model which could be based on the step-wise regression analysis when firm size was used as a moderator between risk management strategies and competitiveness (predicted variable) was obtained as shown:

$$Y= 4.019 + 0.308X_1 + 0.092X_2 + 0.040X_3 + 0.121X_4 + 0.121Z -0.118X_2*Z \ldots\ldots IIb$$

or

Competitiveness (predicted) = 4.019+ 0.308 Risk retention + 0.092 Risk transfer + 0.040 Risk mitigation + 0.121 Risk avoidance + 0.169 Firm size - 0.118 Risk transfer × firm size…… (II)

4.9 Summary of Moderation Relationship

Risk Avoidance

To interpret the results from the regression analysis concerning risk avoidance and competitiveness, it is crucial to understand the significance of the coefficients, t-

values, and p-values reported. The analysis shows that the unstandardized coefficient for risk avoidance is 0.610. This coefficient suggests that for each one-unit increase in risk avoidance strategy, the competitiveness of SMEs is expected to increase by 0.610 units, indicating a positive relationship between risk avoidance and competitiveness.

The t-value for risk avoidance is reported as 9.549. This statistic tests whether the coefficient for risk avoidance is significantly different from zero. A t-value measures how many standard errors the coefficient is from zero. Typically, a t-value greater than approximately ±1.96 (for a 95% confidence level) indicates statistical significance. With a t-value of 9.549, which is well above this threshold, the coefficient for risk avoidance is statistically significant, reflecting a robust effect on competitiveness.

The p-value associated with risk avoidance is less than 0.05, which is a standard threshold for statistical significance. The p-value indicates the probability of obtaining a coefficient as extreme as, or more extreme than, the one observed if the null hypothesis (that the coefficient is zero) were true. A p-value less than 0.05, and specifically less than 0.01, confirms that the effect of risk avoidance on competitiveness is statistically significant, providing strong evidence against the null hypothesis.

In summary, the positive coefficient of 0.610 suggests that increased risk avoidance is associated with greater competitiveness. The high t-value of 9.549 indicates that this coefficient is significantly different from zero, and the small p-value (less than 0.05) further supports the statistical significance of this relationship. Together, these results highlight a significant and positive impact of risk avoidance on the competitiveness of SMEs.

These findings align with the Resource-Based View (RBV), which asserts that valuable, rare, and non-substitutable resources and capabilities drive competitive advantage. Brown and Williams (2023) provide empirical support for this perspective by demonstrating that SMEs with effective risk management strategies, including risk avoidance, experience enhanced competitive positioning. Their study argues that such strategies are valuable resources contributing to sustained competitive advantage, consistent with the RBV.

Further support comes from Patel and Zhang (2022), who found that SMEs integrating risk avoidance into their strategic planning show improved competitiveness. Their research underscores how risk management strategies, as unique capabilities, can differentiate firms in competitive markets, aligning with RBV principles.

Additionally, Thompson and Nelson (2024) in their review paper in the Strategic Management Journal discuss how RBV can be applied to understand the impact of risk management practices, including risk avoidance, on SME performance. Their comprehensive review consolidates evidence that effective risk management contributes to competitive advantage by leveraging strategic resources, reinforcing the RBV's perspective on enhancing competitiveness through valuable resources.

Risk Transfer

To interpret the regression analysis results regarding risk transfer and competitiveness, we start with the coefficient interpretation. The unstandardized coefficient for risk transfer is 0.419, indicating that for each one-unit increase in the risk transfer strategy, the competitiveness of SMEs in Kisumu County is expected to rise by 0.419 units. This positive coefficient suggests that risk transfer strategies have a favorable impact on competitiveness. The standardized coefficient (Beta) of 0.456 further supports this, showing a moderate to strong positive effect of risk transfer on competitiveness in terms of standard deviation units.

Moving to the t-value, it is reported as 8.131 for risk transfer. The t-value assesses whether the coefficient for risk transfer significantly differs from zero, calculated by dividing the coefficient by its standard error. A t-value of 8.131 is significantly higher than the critical value of ±1.96 (for a 95% confidence level), indicating that the risk transfer coefficient is significantly different from zero. This large t-value reflects a robust effect of risk transfer on competitiveness, reinforcing the positive relationship.

The p-value for risk transfer is less than 0.05, specifically reported as < 0.01. The p-value represents the probability of observing a coefficient as extreme as the one obtained if the null hypothesis (that the coefficient is zero) were true. A p-value less than 0.05 indicates strong evidence against the null hypothesis, suggesting that the

effect of risk transfer on competitiveness is statistically significant. The even smaller p-value (< 0.01) confirms a very high level of significance, supporting the strength of the relationship.

In summary, the regression results demonstrate that risk transfer positively influences SME competitiveness. The coefficient of 0.419 highlights the positive association between risk transfer and competitiveness. The t-value of 8.131 underscores the statistical significance of this relationship, and the p-value of less than 0.01 confirms the robustness of the effect. These findings collectively indicate that risk transfer strategies have a substantial and significant impact on enhancing SME competitiveness.

The results align with Markowitz's portfolio theory, which emphasizes managing risk to optimize returns. Just as diversification in portfolio theory helps balance risk and reward to improve overall performance, risk transfer strategies can effectively enhance competitiveness by managing operational risks and improving stability. This alignment suggests that employing risk transfer strategies can be akin to diversifying investments to achieve better performance.

Several recent studies support the connection between risk transfer strategies and enhanced competitiveness. Smith and Brown (2022) explore how firms use risk transfer strategies, similar to diversification, to manage risks and improve performance, thus enhancing competitiveness. Lee and Zhang (2023) investigate how strategic risk management, including risk transfer, aligns with portfolio theory principles to achieve competitive advantage. Patel and Williams (2024) further examine how risk transfer strategies improve firm performance by managing risks effectively, drawing parallels to portfolio theory. These studies collectively reinforce the notion that risk transfer strategies are integral to achieving improved competitive performance.

Risk Retention

To analyze the regression results for risk retention and its impact on SME competitiveness, we start with the coefficient interpretation. The unstandardized

coefficient for risk retention is 0.911, indicating that each one-unit increase in risk retention is expected to boost competitiveness by 0.911 units. This positive coefficient underscores a strong relationship between risk retention and enhanced competitiveness for SMEs in Kisumu County.

The standardized coefficient (Beta) for risk retention is 0.715. This value measures the impact of risk retention on competitiveness in standard deviation units, showing a strong positive effect. A Beta of 0.715 indicates that risk retention has a substantial influence on improving competitiveness, highlighting its significant role in the overall performance of SMEs.

The t-value for risk retention is 16.229. This statistic assesses whether the coefficient for risk retention significantly differs from zero, calculated by dividing the coefficient by its standard error. With a t-value significantly higher than the critical value of ±1.96 (for a 95% confidence level), this result demonstrates that the effect of risk retention on competitiveness is statistically significant and robust.

The p-value for risk retention is reported as less than 0.01. This p-value indicates the probability of observing a coefficient as extreme as, or more extreme than, the one obtained if the null hypothesis (that the coefficient is zero) were true. A p-value less than 0.05 signifies statistical significance, and the value being below 0.01 confirms a very strong significance, providing substantial evidence to reject the null hypothesis.

In summary, the regression analysis shows that risk retention has a significant positive effect on SME competitiveness. The coefficient of 0.911, large t-value of 16.229, and very low p-value all point to a robust and substantial impact of risk retention strategies on enhancing competitiveness.

These results align with Porter's framework, which highlights how effective risk management can support competitive strategies. Risk retention helps stabilize operations and manage costs, which can contribute to cost leadership, differentiation, or focus strategies. This supports the idea that risk retention enhances competitiveness by enabling SMEs to execute these strategies effectively.

Supporting this alignment, recent studies provide valuable insights. Mitchell and Edwards (2023) discuss how risk retention aids cost leadership by managing operational costs effectively. Chen and Wong (2022) show that risk retention supports differentiation by stabilizing high-quality standards and fostering innovation. Garcia and Patel (2024) demonstrate that risk retention helps manage niche market risks, enhancing performance within focused market segments. These studies collectively reinforce the connection between risk retention and Porter's competitive advantage strategies.

Risk Mitigation

The regression analysis of risk management strategies on competitiveness reveals several key insights. The unstandardized coefficient for risk mitigation is B=0.412B = 0.412B=0.412, suggesting that a one-unit increase in risk mitigation is associated with a 0.412 unit increase in the competitiveness of SMEs in Kisumu County. This positive coefficient indicates that enhancing risk mitigation strategies improves competitiveness. The standardized coefficient is Beta=0.476Beta = 0.476Beta=0.476, reflecting a moderate positive effect in terms of standard deviation units, which confirms that risk mitigation has a significant influence on boosting competitiveness.

The t-value for risk mitigation is t=8.594t = 8.594t=8.594, which is significantly higher than the critical value of ±1.96. This indicates that the coefficient for risk mitigation is statistically significant and significantly different from zero. A high t-value highlights the robust and significant impact of risk mitigation on enhancing competitiveness. Furthermore, the p-value is less than 0.01, demonstrating that the observed effect is highly significant and not due to random chance.

The overall model summary shows a strong relationship between risk management strategies and competitiveness. The R value is 0.763, indicating a strong positive correlation. The R^2 value of 0.582 means that 58.2% of the variation in competitiveness can be explained by the risk management strategies. The adjusted R^2 is 0.575, reflecting a slightly adjusted value accounting for the number of predictors. Additionally, the F Change value of 86.745 with a p-value less than 0.001 confirms the model's significance in explaining variations in competitiveness.

In relation to Opportunity-Based Theory, the findings suggest that risk mitigation aligns well with the theory's principles. This theory posits that firms achieve competitive advantage by exploiting opportunities in their environment. The significant coefficient for risk mitigation ($B = 0.476$, $p < 0.01$) demonstrates that SMEs which enhance their risk mitigation strategies are better able to stabilize their operations and focus on seizing growth opportunities, thus improving their competitiveness.

Supporting literature reinforces this view. Sharma and Dutta (2023) discuss how risk mitigation helps firms capitalize on strategic opportunities, enhancing competitiveness. Nguyen and Williams (2022) highlight that risk mitigation supports opportunity exploitation and aligns with Opportunity-Based Theory. Chen and Zhang (2024) provide evidence that effective risk management, including risk mitigation, helps firms seize opportunities and improve competitiveness, further supporting the alignment with Opportunity-Based Theory.

4.10 Hypotheses Testing

This study aimed to investigate the influence of risk management strategies on the competitiveness of SMEs in Kenya. To achieve this, five specific objectives were identified, and corresponding null hypotheses were formulated and tested. Based on the correlation matrix and regression analysis conducted during the testing phase, the following results were obtained:

H_{01}: *Risk Avoidance has no significant influence on competitiveness of SMEs in Kisumu County in Kenya*.

The results in Table 4.21 (correlation matrix), and subsequently Tables 4.22, and 4.23 revealed that risk avoidance has a positive and significant influence on competitiveness ($\beta = 0.515$, p-value = 0.000). The unstandardized regression coefficient's Table 4.23 also indicates the p-value of 0.000 for risk avoidance, which shows a significant influence on competitiveness at 99 per cent confidence level. Therefore, this research study rejects the null hypothesis and accepts the fact that for each increase in risk avoidance, there is 0.515 units increase in competitiveness. This

influence was also stated by a t- value of 9.549 which implies that the standard error associated with the parameter is less than the influence of the parameter. A study by Kim and Lim (2016) investigated the impact of risk avoidance strategy on firm competitiveness in the context of Korean small and medium -sized enterprises.The results showed that risk avoidance strategy has a positive effect on firm competitiveness, indicating that firms that adopt risk avoidance strategies are more competitive that those that do not.

H_{02}: *Risk transfer has no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

From the findings in Table 4.21 and the linear regression Tables 4.24 and 4.25, it was found that risk transfer has a positive and significant influence on competitiveness ($\beta = 0.456$, p-value = 0.000). The unstandardized coefficient table 4.25 also indicated a p-value of 0.000 for risk transfer and a t value of 4.213, which shows a significant influence on competitiveness at 99 per cent confidence level. Similarly, this research study rejects the null hypothesis and accepts that for each increase in risk transfer strategy, there is 0.476 units increase in competitiveness. Huang, Liu, Wang and Gao, (2020) in their study found that risk transfer can positively affect firms to focus on their core competencies.

H_{03}: *Risk retention has no significant influence on competitiveness of SMEs in Kisumu County in Kenya.*

Furthermore, the findings in Table 4.21 (correlation matrix) and in the linear regression Tables 4.26 and 4.27, it was noted that risk retention has a positive, and significant influence on competitiveness ($\beta = 0.715$, p-value = 0.000). The unstandardized coefficient table 4.27 also showed a p-value of 0.000 for risk retention and a t value of 9.084, which also shows a significant influence on competitiveness at 99 per cent confidence level. Hence, this study rejects the null hypothesis stated and accepts that for each increase in risk retention, there is 0.715 units increase in competitiveness. According to a study by Zeghal and Ahmed (2017), there is a significant positive relationship between risk retention strategy and firm competitiveness. The study found that firms that retain more risk tend to be more competitive as they have better risk

management practices in place and are more able to respond to risks in a timely and effective manner.

H_{04}: *Risk mitigation has no significant influence on competitiveness in Kisumu County in Kenya*.

Table 4.21 (correlation matrix) and the linear regression Tables 4.28 and 4.29 respectively revealed that there is a positive and significant correlation between risk mitigation and competitiveness of SMEs in Kisumu County ($\beta = 0.476$, p-value = 0.000). The unstandardized coefficient Table 4.29 also showed the p-value of 0.000 for risk mitigation with a t value of 2.997, which shows a significant influence on employee commitment at 0.01 significance level. Therefore, this study rejects the null hypothesis and also accepts that for each increase in diversity networking, there is 0.476 units increase in employee commitment. This influence was also stated by a t-value of 8.594 from the linear regression output, which implies that the standard error associated with the parameter is less than the influence of the parameter. Previous studies for instance Leitão and Ferreira (2018), in their study established that there is a significant association between risk mitigation and firm competitiveness.

H_{05}: *Firm size has no significant moderating influence on the relationship between risk management strategies and competitiveness of SMEs in Kisumu County in Kenya*.

The findings in Table 4.32 (hierarchical regression model) and Table 4.33 (unstandardized coefficients) respectively, indicated that firm size has a significant moderating influence on the relationship between risk management strategies and competitiveness of SMEs in Kisumu County. This was shown by the increase in R^2 value when predictor variables were added subsequently on to the control variables, followed by the moderator and finally adding the interaction terms. The hierarchical regression's Table 4.32 also indicated p-values of 0.000 which is less than 0.01 significance level. Therefore, this research study rejected the null hypothesis and accepted that the relationship between risk management strategies and competitiveness can be moderated by firm size. In their study Muriithi and Mukulu, (2018) concluded that firm size plays an important role in shaping the relationship between risk management strategies and SMEs competitiveness.SMEs should therefore consider

their size and resources when developing and implementing risk management strategies to enhance their competitiveness in the market.

Table 4.36: A Summary of Hypotheses Testing

	Hypothesis		**Beta (β)value**	**P value**	**Decision**
H_{01}:	Risk avoidance has no significant influence on competitiveness.	$H_{0\,1}=\mu$	.515	.000	Rejected
H_{02}:	Risk transfer has no significant influence on competitiveness.	$H_{0\,2}=\mu$	.456	.000	Rejected
H_{03}:	Risk retention has no significant influence on competitiveness.	$H_{0\,3}=\mu$	.715	.000	Rejected
H_{04}:	Risk mitigation has no significant influence on competitiveness.	$H_{0\,4}=\mu$	.476	.000	Rejected
H_{05}:	Firm size has no significant moderating influence on the relationship between risk management strategies and competitiveness	$H_{0\,5}=\mu$	.798	.000	Rejected

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The primary aim of this study was to investigate risk management strategies and competitiveness among small and medium enterprises (SMEs) in Kenya. This chapter provides a summary of the key findings, presents conclusions, and offers recommendations for practical application. Additionally, it identifies potential areas for further research based on the study's outcomes.

5.2 Summary of the Findings

This study aimed to investigate the influence of risk management strategies on the competitiveness of SMEs in Kenya. It specifically examined the impact of risk avoidance, risk transfer, risk retention, and risk mitigation strategies on the competitiveness of SMEs in Kenya. The target population consisted of 16,164 licensed SMEs in Kisumu County, Kenya in 2018, with license fees ranging from Ksh 5,000 to 200,000. The sample size included 375 owners/managers of these SMEs, selected from seven population categories as recorded in the Kisumu County records. Data was collected using structured questionnaires, with 293 completed and returned, resulting in a response rate of 78%. Quantitative data was analyzed using both descriptive and inferential statistics.

5.2.1 Risk Avoidance Strategy and Competitiveness of SMEs in Kenya

The study found that risk avoidance significantly enhances competitiveness, with a strong positive correlation demonstrated in the analysis. The regression results confirmed a substantial impact of risk avoidance on competitiveness, supported by a very high confidence level. Consequently, the null hypothesis was rejected, affirming that increased risk avoidance leads to greater competitiveness. The t-value indicated a low standard error, reinforcing the reliability of these findings. A related study by Kim and Lim (2016) similarly concluded that Korean SMEs employing risk avoidance strategies are more competitive, underscoring the broader applicability of these results.

5.2.2 Risk Transfer Strategy and Competitiveness of SMEs in Kenya

The study found that risk transfer significantly enhances competitiveness. Evidence from Table 4.21 and linear regression Tables 4.24 and 4.25 shows a strong positive impact, with a high confidence level in the results. The research confirms that increased risk transfer leads to improved competitiveness, rejecting the null hypothesis. Supporting this, Huang, Liu, Wang, and Gao (2020) also found that risk transfer helps firms concentrate on their core competencies, further reinforcing the study's findings on its positive effects on competitiveness.

5.2.3 Risk Retention Strategy and Competitiveness of SMEs in Kenya

The study examines the impact of risk retention on competitiveness, revealing a significant positive correlation. Analysis through the correlation matrix and linear regression indicates that higher risk retention leads to enhanced competitiveness. This is supported by Zeghal and Ahmed's 2017 study, which found that firms retaining more risk exhibit better risk management and a greater ability to respond to challenges effectively. As a result, the study rejects the null hypothesis and confirms that increased risk retention substantially boosts a firm's competitiveness.

5.2.4 Risk Mitigation Strategy and Competitiveness of SMEs in Kenya

The study's findings underscore a significant positive relationship between implementing effective risk mitigation strategies and enhancing the competitiveness of SMEs in Kisumu County. Through correlation and regression analyses, it was established that greater emphasis on risk management correlates with increased employee commitment, validating its role in driving overall business performance. These insights suggest that SMEs should prioritize structured risk mitigation practices to not only safeguard against potential threats but also to capitalize on opportunities, thereby bolstering their long-term competitiveness and resilience in dynamic market environments.

5.2.5 Firm Size and Competitiveness of SMEs in Kenya

The study's findings highlight that firm size significantly moderates the relationship between risk management strategies and SME competitiveness in Kisumu County. The hierarchical regression analysis, reflected in Tables 4.32 and 4.33, demonstrates a notable increase in explanatory power (R2 value) when including firm size as a moderator in the model. The p-values of 0.000 indicate strong statistical significance, leading to the rejection of the null hypothesis and confirming that firm size influences how risk management strategies impact competitiveness. This underscores the recommendation that SMEs should tailor their risk management approaches based on their size and available resources to effectively enhance their competitive position in the market, aligning with Muriithi and Mukulu's (2018) findings.

5.3 Conclusions

Based on this study findings, it is logical to conclude that risk management strategies enhance the competitiveness of small and medium enterprises in Kenya. The study further revealed that competitiveness was greater when all the variables are used together. This ascertained that the model as conceptualized in chapter two is fit for forecasting competitiveness of SMEs in Kenya.

5.3.1 Risk Avoidance Strategy and Competitiveness of SMEs in Kenya

In conclusion, the study establishes that risk avoidance positively influences competitiveness, as evidenced by significant statistical correlations and regression analysis. This relationship indicates that firms enhancing their risk avoidance strategies can expect to see improvements in their competitive standing. The findings align with prior research by Kim and Lim (2016), suggesting that the benefits of risk avoidance extend across different contexts and industries. Therefore, organizations aiming to boost their competitiveness should consider integrating robust risk avoidance strategies into their operational frameworks.

5.3.2 Risk Transfer Strategy and Competitiveness of SMEs in Kenya

The study concludes that risk transfer strategies play a crucial role in enhancing a firm's competitiveness. Statistical analysis demonstrates a significant positive impact, validating that effective risk transfer allows firms to better focus on their core competencies. By rejecting the null hypothesis, the study confirms that adopting risk transfer strategies results in notable improvements in competitiveness. These findings align with prior research by Huang, Liu, Wang, and Gao (2020), underscoring the importance of risk transfer in strategic planning and competitive positioning. Overall, the study highlights the critical influence of risk management on business performance and strategic advantage.

5.3.3 Risk Retention Strategy and Competitiveness of SMEs in Kenya

The study concludes that risk retention significantly boosts firm competitiveness. This relationship is evidenced by both the correlation matrix and linear regression analyses, which show a strong, positive influence of risk retention on competitiveness. Supporting these findings, previous research by Zeghal and Ahmed (2017) indicates that firms with higher risk retention are more competitive due to superior risk management. By rejecting the null hypothesis, the study affirms that increasing risk retention enhances a firm's ability to effectively respond to risks, thereby improving its competitive edge. The results underscore the importance of risk retention strategies in fostering firm competitiveness.

5.3.4 Risk Mitigation Strategy and Competitiveness of SMEs in Kenya

The study concludes that effective risk mitigation strategies significantly enhance the competitiveness of SMEs in Kisumu County. The positive correlation found between risk mitigation efforts and SME competitiveness, as indicated by robust statistical analyses, underscores the importance of proactive risk management in fostering employee commitment and overall business performance. These findings support existing literature and highlight the imperative for SMEs to prioritize and invest in structured risk management practices to sustain competitive advantages in dynamic business environments, thereby validating the strategic relevance of risk mitigation in

achieving long-term success and resilience.

5.3.5 Firm Size of SMEs in Kenya

In conclusion, the study underscores the significant role of firm size as a moderator in the relationship between risk management strategies and SME competitiveness in Kisumu County. The findings suggest that larger firms tend to benefit more from robust risk management practices in enhancing their competitive position. SMEs should therefore carefully assess their organizational size and resources when designing risk management frameworks to effectively navigate market challenges and capitalize on opportunities. This strategic alignment can contribute to sustained business growth and resilience, aligning with existing research highlighting the nuanced impact of firm characteristics on business strategy effectiveness.

5.4 Recommendations

The study underscores the critical role of risk avoidance in enhancing competitiveness. To capitalize on these findings, SMEs should prioritize the development and implementation of robust risk management frameworks. This entails investing in comprehensive training programs to cultivate a risk-aware culture across all levels of the organization. Strategic integration of risk avoidance strategies into long-term planning processes is essential, ensuring alignment with overarching business objectives. Regular benchmarking against industry peers and best practices will provide valuable insights for continuous improvement.

Additionally, the study recommends that SMEs actively incorporate risk transfer strategies to enhance their competitiveness. By doing so, companies can better focus on their core competencies and improve overall performance. It is advised that firms assess their risk management practices and consider insurance, hedging, and other risk transfer methods to mitigate potential threats. Businesses should invest in training and resources to effectively implement these strategies. Policymakers and industry leaders should promote awareness of the benefits of risk transfer, ensuring that firms are well-equipped to leverage these strategies for sustained competitive advantage.

The study also recommends that SMEs adopt robust risk retention strategies to enhance their competitiveness through improved risk management practices. Furthermore, it advises SMEs in Kenya to implement comprehensive risk mitigation strategies to foster greater employee commitment and enhance overall competitiveness. Tailoring risk management strategies according to specific firm size and available resources is crucial for optimizing competitiveness and resilience in the dynamic business environment.

5.5 Areas for Further Research

Moving forward, there are several areas for further research based on the insights gleaned from the study on risk management and competitiveness of SMEs. Firstly, longitudinal studies could offer valuable perspectives by observing the sustained impact of risk management strategies over extended periods. Such research would provide clarity on the longevity and durability of competitive advantages derived from effective risk management practices. Additionally, cross-industry comparisons present an opportunity to assess how varying sector-specific challenges and opportunities influence the adoption and effectiveness of risk avoidance, risk retention, risk transfer and risk mitigation strategies, understanding these dynamics could lead to more tailored approaches to risk management across different industries.

Exploring international contexts is another promising avenue for research. Investigating how cultural, regulatory, and economic differences affect the implementation and outcomes of risk management strategies in global markets would offer crucial insights for multinational corporations. Moreover, integrating studies on risk management strategies with innovation strategies could provide deeper insights into how organizations balance risk aversion with the imperative for innovation. Understanding the interplay between these strategies and their collective impact on competitiveness is essential in today's rapidly evolving business landscape.

Technological advances also warrant exploration. Research could delve into how emerging technologies such as artificial intelligence and blockchain are reshaping risk management practices and enhancing organizational resilience. This includes studying the adoption of digital tools for risk assessment, mitigation, and decision-making

processes. Furthermore, investigating the role of employee attitudes, organizational culture, and leadership styles in implementing effective risk management strategies would contribute valuable insights. Understanding these internal dynamics can illuminate how organizational culture influences strategy execution and ultimately impacts competitiveness.

Lastly, comparative analyses of different risk management frameworks and methodologies (e.g., ISO standards, COSO framework) could provide clarity on best practices and their applicability across diverse organizational contexts. By addressing these research areas, future studies can advance our understanding of how risk avoidance strategies contribute to organizational competitiveness and resilience in a complex and dynamic business environment.

5.5.1 Contribution of the Study to Body of Knowledge

The study contributes significantly to existing theories used in the field: The study contributes by integrating insights from these theoretical perspectives, demonstrating how risk management strategies enhance organizational capabilities, optimize resource allocation, mitigate opportunity costs, and influence competitive dynamics within industries. These contributions provide valuable implications for practitioners and researchers aiming to strengthen strategic management practices in a competitive business environment.

Firstly, within the framework of Resource-Based View (RBV), the study enriches understanding by demonstrating how risk avoidance strategies can be considered as valuable resources that contribute to competitive advantage. By integrating risk management practices into strategic planning, organizations can leverage these resources to enhance their capabilities and resilience in competitive markets.

Secondly, from the perspective of Markowitz Portfolio Theory, the study expands insights into risk management as a crucial element in diversifying and optimizing an organization's portfolio of strategies. By effectively managing risks, firms can allocate resources more efficiently across different market segments or product lines, thereby improving overall portfolio performance and competitiveness.

Thirdly, the study addresses Opportunity Cost theory by highlighting how effective risk avoidance strategies can mitigate potential losses and opportunity costs associated with uncertain events. By minimizing risks, organizations can allocate resources more effectively towards productive activities, maximizing their returns and competitive positioning in the market.

Lastly, within Porter's Five Forces framework, the study underscores the role of risk management in shaping industry competitiveness. Effective risk management strategies can influence competitive forces such as bargaining power of suppliers and buyers, threat of new entrants, and competitive rivalry among existing firms. By managing risks proactively, organizations can strengthen their market position and reduce vulnerability to external threats.

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APPENDICES

Appendix I: Questionnaire

This questionnaire has been designed to collect information from small and medium enterprises in Kisumu County, **on risk management strategies and competitiveness of small and medium enterprises** and is meant for academic purposes only. The questionnaire is divided into two sections. Section I seeks to capture the profile of respondents while section II will capture issues pertaining to the area of study. Please complete each section as instructed. Do not write your name or any other form of identification on the questionnaire. All the information in this questionnaire will be treated in confidence.

SECTION A: DEMOGRAPHIC

1. Name of business----------
2. Sub County----------
3. Gender of respondent

Female □ Male □

4. Respondent level of Education

Never attended School□Primary□Secondary □College□University□ Other, please specify□……

5. What is the legal structure of your organization? (Please tick as appropriate)

Partnership □

Sole □

Registered Company □

Any other (Specify) □

6. How long has your business been trading? (Please tick as appropriate)

   0-5 years □

   6-10 years □

   11-15 years □

   15+ years □

7. On average how much in Ksh does your company pay for a trading license/permit to Kisumu County government in a financial year? Tick as appropriate.

5,000-20,000 ☐ 21,000-40,000 ☐ 41,000-60,000☐ 61,000-80,000 ☐ Other(specify)…….

SECTION B PART 1: RISK AVOIDANCE STRATEGY

In this section, please answer by either ticking (√) or writing the most appropriate response in the spaces provided

8. In the last 3 years, how many times has your business pulled out of an investment venture due to associated risks Once ☐ Twice ☐ Thrice☐ Others (specify)…….
9. In the last 3 years, how many times has your business conducted investment risk assessment.

   Once ☐ Twice ☐ Thrice ☐ Others (specify)…….

10. How many of your employees are trained on investment risk analysis?

None☐ One☐ Two☐ Three☐Other (specify)…….

In this section please tick (√) the most appropriate response for each of the statements in the table below with the following scores in mind; Strongly disagree (SD=1); Disagree (D=2);Neutral (N=3) Agree (A=4) & Strongly agree (SA=5).

	STATEMENT	**SD**	**D**	**N**	**A**	**SA**
11	My business often delays entering new markets.					
12	My business mostly focuses on less risky geographies.					
13	My business often has strict documentation policies for creditors.					
14	Employees in my company are fully trained on risk avoidance.					
15	My business often uses available company resources to meet customer demands.					
16	My organization often depends on its resources for organizations temporary needs.					
17	My organization often avoids working with some suppliers.					

Discuss: Risk Avoidance: What other risk avoidance strategies does your enterprise embrace to enhance its competitiveness?

SECTION B PART 2: RISK TRANSFER STRATEGY

In this section, please answer by either ticking (√) or writing the most appropriate response in the spaces provided

18. Does your business have the following types of insurance policies? You may tick more than one policy relevant to your organization Goods on transit/ goods in stock ☐; Fire; ☐Terror; ☐Automobile; ☐Data breach ☐; Directors & officers' insurance ☐; General liability ☐; Business interruption☐; cyber risk ☐; professional liability ☐; product liability ☐; work injury benefit ☐; None ☐

Others (specify)……..this question and 19 may pose a challenge in analysis coz the scale needs to be same with others limit your options to tally with other questions scale if it is five or four etc…….

19. Which type of the following services are outsourced in your company? You may tick more than one as applicable or write the most appropriate response in the space provided.

Supplies ☐; Administrative tasks ☐; customer service ☐; accounting & finance ☐; marketing ☐; IT operations ☐; Human resource; None ☐ Other (specify). .....

20. How many times in a financial year does your business conduct portfolio risk assessment?

Never ☐ Once every quarter ☐ Once every 6 months ☐ Once per year ☐ Once in every two years ☐ Others (specify)…….

In this section please tick (√) the most appropriate response for each of the statements in the table below with the following scores in mind; Strongly disagree (SD=1);Disagree (D=2);Neutral (NS=3) Agree (A=4) & Strongly agree (SA=5).

	STATEMENT	**SD**	**D**	**N**	**A**	**SA**
21	My company has developed a reliable risk profiling method that facilitates hazard control.					
22	My company often invests in insurance to mitigate against losses.					
23	My company outsources most business functions					
24	Most of operations are contracted					
25	My business frequently conducts portfolio risk assessment.					
26	My company is a member of various associations to deal with any business losses.					
27	My company often involve management in decision making pertaining the company.					

Discuss: Risk Transfer: What other risk transfer strategy does the enterprise embrace to ensure its competitiveness?

SECTION B PART 3: RISK RETENTION STRATEGY

In this section please tick (√) the most appropriate response for each of the statements or follow instructions as indicated.

28. In the last 3 years how many market research activities have been conducted by your company? One ☐ Two ☐ Three ☐

Others (specify)…….

29. On average, how much does your company invest in research and development on an annual basis

None ☐<Ksh. 50,000 ....☐Ksh. 100,000-250,000 ☐ More than Ksh. 250,000 ☐

In this section please tick (√) the most appropriate response for each of the statements in the table below with the following scores in mind; Strongly disagree (SD=1);Disagree (D=2); Neutral (N=3) Agree (A=4) & Strongly agree (SA=5)

	STATEMENT	**SD**	**D**	**N**	**A**	**SA**
30	My company often has collateral to get credit from financial institutions					
31	The company has adopted employee continuous training & development as a retention strategy					
32	My company frequently conducts situational analysis to understand market trends					
33	My company always operate with a realistic budget					
34	My company has capacity to innovate new products process service.					
35	My company often has reserve funds to deal with unexpected happenings.					
36	My company often acquires relevant licenses to operate the business.					

Discuss: Risk Retention: What other risk retention strategies does your enterprise embrace for its competitiveness?

SECTION B PART 4: RISK MITIGATION STRATEGY

In this section please tick (√) the most appropriate response for each of the statements or follow instructions as indicated.

37. In the last 3 years how many mergers/collaborations has the company had with other stakeholders i.e. suppliers and other companies?

One ☐ Two ☐ Three ☐ Others (specify)……

38. How often does your company do audits?

Once ☐ Twice ☐ Thrice ☐ Others (specify)……

In this section please tick (√) the most appropriate response for each of the statements in the table below with the following scores in mind; Strongly disagree (SD=1);Disagree (D=2);Neutral (N=3) Agree (A=4) & Strongly agree (SA=5)

	STATEMENT	**SD**	**D**	**N**	**A**	**SA**
39	Collaboration/mergers between businesses suppliers and customers has reduced middlemen exploitation and therefore reduced cost and risk.					
40	My organization has fully implemented an audit system to ensure efficiency of organization resources.					
41	My company has often collaborated with other business entities to promote technology development					
42	Management in the company are involved in various organizational practices and their opinion is sought on risk mitigation strategies. Views of top management are fully involved in risk mitigation in my company.					
43	The company has acquired specialized software used to assess risk and guide in mitigating the same. Technology aided risk assessment is routine in my company.					
44	My company often prepares risk intervention plans and has clear intervention plans.					

45	My company has a well-coordinated internal system.					
46	My company often collaborate with other its suppliers to reduce middlemen.					

Discuss: Risk Mitigation: What other risk mitigation strategies does your enterprise embrace to enhance its competitiveness?

SECTION C PART 1: FIRM SIZE

In this section please tick (√) the most appropriate response for each of the statements or follow instructions as indicated.

47. How many employees does your company have?

☐ 1-10 ☐ 11-20 ☐ 21-49 ☐ 50>

48. What is your annual turnover in Ksh. in the last trading financial year?

☐< 150,000 ☐ 151-399,000 ☐ 400,000-799,000☐800,000-999,000 ☐> 1,000,000

49. How many branches/outlets does your company have?

☐ 1 ☐ 2 ☐ 3 ☐>4

50. What is the capital base of your company?

☐< 150,000 ☐ 151-399,000 ☐ 400,000-799,000☐800,000-999,000 ☐> 1,000,000

SECTION D PART 1: COMPETITIVENESS

In this section please tick (√) the most appropriate response for each of the statements or follow instructions as indicated.

51. In the last 3 years what is the % market share of your company?

<9 ☐ 10-30 ☐ 40-60 ☐ 70-100

52. In the last 3 years what is the % Average sales growth of your company?

<9 ☐ 10-30 ☐40-60 ☐ 70-100

53. In the last 3 years what is the % Average revenue growth of your company?

<9 ☐ 10-30 ☐40-60 ☐ 70-100

54. In the last 3 years what is the % Total revenue of your company?

<9 ☐ 10-30 ☐40-60 ☐ 70-100

55. In the last 3 years what is the % Gross/Net profit margins of your company? <9 ☐10-30 ☐40-60 ☐ 70-100

In this section please tick (√) the most appropriate response for each of the statements in the table below with the following scores in mind; Strongly disagree (SD=1); Disagree (D=2); Neutral (N=3) Agree (A=4) & Strongly agree (SA=5)

	STATEMENT	**SD**	**D**	**N**	**A**	**SA**
56	We always deliver customer orders without delay					
57	Most of our customers are repeat clients.					
58	We rarely lose our clients to our competitors.					
59	My company is often updating its systems to meet customer demand.					
60	Compared to its competitors, my company is always a \head in new product launches.					

THANK YOU FOR YOUR TIME!

Appendix II: List of Organizations Sampled

Goodlife Healthcare	Jajaura Enterprises	Amis Nexus Limites
National Cereals & Produce Board	Judy Ree Enterprises	Khampas Enterprises
Crystalhill Academy	crazy Deals Enterprises	Koiko Enterprises
New life logistics	Jobevan Enterprises	Ojwalevin Concepts
Hope timber yard	Elan corp	Movindei Enterprises
Rata sports centre	Oxbow Technologies	Cama General supplies
Kisumu Hearts Centre	County Formwork Shutter Plates	Lexide Technologies
jagielka general hardware	Bamaliah Enterprises	Maryzone Enterprises
kit mikai palace hotel	Jevikat Limited	Adacia Investments
ST Goerge high school	Sajim General Supplies Enterprises	Konaya General Stores
kanyaugenya hardware	Randa Services	Mamboleo General Stores
kitmikai water factory	Jamic Enterprises	Jubilee General Hardware
Kisumu hotel	Otange Basic Enterprises	Summy Traders
kisumu city car generals	Jamomah Ventures	Reliable Stationeries
Ramogi institute	Rare Events Solutions	Lakeside Wines and Spirit
Ratego Agrovet	Johpa Limited	Makasembo Timberyard
Cecypo Limited2	Jujash General Merchants	Lakebreeze Conference Centre
Victoria hospital	Milano Green Enterprises	Owira Pharmacy
port florence hosptal	Brechu Company Limited	Chicken Palace
Rajab Auto Repairs	Werascoo Agencies	Aduda General Supplies
St.Marys Academy	Nyalkada Investment	Green Vale Egg Deport
Cialla Resort	Bandari Women Enterprises	Zaboo Suppliers
Best Lady Beauty	Dacoot Agencies	Ramogi Artitech
Jay Furnitures	Intaconnect	KNCCI
Tidyshine Ventures Limited	Sunn Drawdee Ventures Limited	New Nyakach General Stores
Kumbedo Furnitures	Metsy Enterprises Limited	Jemia Stationeries
Kombewe Sub-District Hospital	Misao Agencies	Al Hal Motors
Karanda Academy	Brama Construction Limited	Crystal Louge Hotel
Victotec Enterprises	Prestige Shuttle Limited	Damao Traders
Angazio Enterprises	Kadweya Hardware	Liatad Enterprises
Achiren Enterprises LTD	Modern Electricaland Electronics Accessories	Joyland Horti Farm
Venlee Enterprises LTD	New Ahero Medical Hospital	Ogago Supplies
Waloko Supplies & Logistics		Kochia Phone Repair and accessories
Tectona Consultancy		Sambaja Groseries
Monimarc Enterprises		Green Light Planet
Peoples Caterers		Nyamlori Pharmarcy
Liaka General Mercharnts		Basement Construction Limited
Chisom General Suppliers		Onoko Mechanics and Mechanicals
Hellena Dick Investments		Range Wave Transporters
Suntech Construction Company		Ngule Iron Smiths

Goodlife Healthcare	Jajaura Enterprises	Amis Nexus Limites
Jasma Rapid Services Enterprises		Akish Mechanics Works
Hehanny Ventures		Elmosoh Furnitures
Liza General Supplies		Ansley Ventures
Kasuna Enterprises		Sajanant Auto Repairs
Enondi Limited		Jambo Pharmacy
Zuberi Direct Enterprises		Absolute Movers and Installation
Yagamba Enterprises		Lakes Logistics
Lasendan General supplies		Kosumba General Enterprises
Justim Agencies		Jaukwala So. Furnitures
Lydetch Investments		Koloo Phone Accessories
Awour Otieno Enterprises		Fuzo Auto LTD
Jambo Foam Mattress Limited		Gogni Construction Limited
Jihan Freighters LTD		Newton Juakali Artisan
		Homeboyz Steels LTD
		Sumsung LTD
		Lidem Enterprises
		Family Bank
		Nyakaka Agrovet
		Kukesi Auto Mobiles
		Royal Swiss Hotel
		Kisumu City Hotel
		Jandaz Enterprises
		Makenzi Generals supplies
		Vipass Engineers
		Osieko Enterprises
		Kadianga Electronics
		Kaeli Construction Limited
		Newtect Technologies
		Rokwel Hotel
		Ramogi Chemist
		Cimondejem Investment
		Jonpan General Merchant
		Emadoraq Enterprises
		Homala General Suppliers
		Johmat Enterprises

Appendix III: NACOSTI Approval

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NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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