

**EFFECT OF INVESTMENT DECISIONS ON THE FINANCIAL
PERFORMANCE OF SACCOS IN BUNGOMA COUNTY, KENYA**

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**A Thesis submitted in partial fulfillment of the requirements for the award of the
degree of Master's in Business Administration (Finance Option) of Masinde Muliro
University of Science and Technology**

November, 2024

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DEDICATION

This research is dedicated to the following people, first my parents and siblings for their support. Their words of wisdom and encouragements that impacted my research. Secondly, my research supervisors for their support taking me through each step explaining and correcting me where improvement was needed. Lastly, my friends and all those I interacted with as I tried to come up with a research that was certifiable.

ACKNOWLEDGEMENT

Great appreciation goes to the Lord for giving divine power to undertake this research. I acknowledge my research supervisors Dr. Maniagi and Dr. Mungai for academic guidance especially on research. I thank the school of business and economics for providing conducive learning environment. Much regards to the family for much support accorded.

ABSTRACT

Financial performance of SACCOs in Kenya has been a major concern in recent years, as they play a critical role in promoting financial inclusion and economic development in the country. SACCOs in Kenya have been criticized for making poor investment decisions, leading to losses and declining financial performance. Several studies have explored the effect of investment decisions on the financial performance of SACCOs. However, these studies have not been able to fully solve the financial performance problem facing SACCOs in Kenya due to various factors. The study on investment decisions' effect on SACCOs' financial performance in Bungoma County was significant for promoting financial inclusion and overcoming challenges faced by SACCOs, including competition from digital financial services. The study aimed at examining the effect of investment decisions on the financial performance of Savings and Credit Cooperative Organizations in Bungoma County, Kenya. The research focused on three specific objectives: expansion, replacement and research and development decisions and their effect on financial performance. The study was guided by three theories that include Tobin q theory, Transaction cost theory and Modigliani-Miller Theorem. To achieve its objectives, the study used a quantitative cross-sectional survey design. A total of 600 respondents were targeted from where 240 respondents were sampled including CEO, CFO, accounting staff and administrative staff. Stratified, proportionate and simple random sampling was used. To ensure the validity and reliability of the data collected, the researcher used various methods. Firstly, expert review, construct and criterion validity were employed to ensure validity of the questionnaires used. Secondly, the Cronbach alpha method was used to test the reliability of the questionnaires. A pilot study was conducted to identify any issues with the questionnaires before the actual study. After collecting data, it was cleaned and coded to ensure that was ready for analysis. Descriptive statistics such as frequency and percentages were computed to summarize the investment decisions and financial performance. Expansion decision was a significant predictor of financial performance ($r = 0.708$, $p\text{-value} = 0.000 < 0.05$). R-square of 0.501 implied that variation of financial performance at 50.1% was explained by expansion decision. Replacement decision was a significant predictor of financial performance ($r = 0.738$, $p\text{-value} = 0.000 < 0.05$). R-square of 0.544 implied that variation of 54.4% of financial performance was explained by replacement decision. The results also confirmed that at 0.05 significance level research and development was a significant predictor of financial performance ($r = 0.673$, $p\text{-value} = 0.000 < 0.05$). R-square was 0.453 implied that variation of 45.3% of financial performance was explained by research and development. The recommendations were that on expansion decisions, SACCOs should open more branches and invest in technology so as to maintain the significance level on financial performance. Replacement decisions should avoid outdated technology, design amicable policies and procedures so as to maintain the significance level on financial performance. Research and development decisions such as introduction of new products and services should be put in place to help increase market share that would stimulate financial performance.

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ACRONYMS AND ABBREVIATIONS

LASCOFED:	Lagos State Cooperative Federation
R&D:	Research and Development
ROA:	Return on Assets
SACCOs:	Savings and Credit Cooperative Organizations
SRI:	Socially Responsible Investments
UCA:	Uganda Coperative Alliance
MCDM:	Ministry of Cooperative Development and Marketing
KNBS:	Kenya National Bureau of Statistics
SASRA:	Sacco Societies Regulatory Authority
CEO:	Chief Executive Officer
CFO:	Chief Financial Officer

OPERATIONAL DEFINITION OF TERMS

Expansion decisions: Expansion decisions refer to the choices made by a company to increase its business operations by increasing the number of products, services, or geographic locations it operates in. In the context of the study, expansion decisions relate to the choices made by SACCOs in Bungoma County to open new branches or expand their membership base.

Financial performance: Financial performance refers to the ability of a company to generate revenue and profits, manage its expenses, and maintain financial stability over time. In the context of the study, financial performance relates to the ability of SACCOs in Bungoma County to generate revenue and profits, manage their expenses, and maintain financial stability over time.

Investment decisions: Investment decisions refer to the process of choosing where to allocate resources with the expectation of generating a return on that investment. In the context of the study, investment decisions relate to the choices made by SACCOs in Bungoma County regarding where to allocate their resources in order to improve their financial performance.

Replacement decisions: Replacement decisions refer to the choices made by a company to replace an existing asset with a new one. In the context of the study, replacement decisions relate to the choices made by

SACCOs in Bungoma County to replace fixed assets, such as equipment or buildings, with newer ones.

Research and development decisions: Research and development decisions refer to the choices made by a company to invest resources in developing new products, services, or processes or improving existing ones. In the context of the study, research and development decisions relate to the choices made by SACCOs in Bungoma County to invest in developing new products or services or improving their existing ones.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

1.1.1 Introduction

Financial performance refers to the ability of an organization to effectively generate and manage financial resources to achieve its objectives (Barasa & Ngugi, 2019). It encompasses a range of metrics that assess an organization's financial health, such as revenue, profit margins, return on investment, liquidity, and solvency. In the context of Savings and Credit Cooperatives (SACCOs), financial performance is particularly important as SACCOs are member-owned financial institutions that provide savings, credit, and other financial services to their members (Kibet & Odongo, 2020).

The financial performance of SACCOs can be assessed using various indicators, such as the level of loan portfolio growth, asset quality, return on equity, liquidity, and capital adequacy (Okoth & Juma, 2021). The assessment of financial performance is usually done through financial ratios, trend analysis, and benchmarking against industry standards.

Investment decisions refer to the process of analyzing and evaluating investment opportunities in order to determine which investments are most likely to meet an investor's objectives (Kassim & Bwisa, 2019). In the context of SACCOs, investment decisions are particularly important as SACCOs provide investment opportunities to their members (Kibet & Odongo, 2020). Members can invest their savings with the SACCO and earn returns on their investment. SACCOs that have a strong financial performance, with good

returns on investment, are more likely to attract and retain members who are interested in investing their savings (Barasa & Ngugi, 2019).

Moreover, the financial performance of a SACCO is also important for the management of its investment portfolio. SACCOs often invest their members' savings in various investment vehicles, such as government securities, bonds, and stocks. Therefore, SACCOs need to ensure that their investment portfolio is well-diversified, and that the investments they make align with their risk appetite and financial objectives. By doing so, SACCOs can effectively manage investment risks and generate returns for their members (Okoth & Juma, 2021).

Globally, Investment decisions have a significant impact on the financial performance of Savings and Credit Cooperative Societies (SACCOs) worldwide. In Europe, SACCOs have diversified their investment portfolios to include sustainable investments such as green bonds and socially responsible investments (SRI). This has helped to improve their financial performance while contributing to environmental and social sustainability (Altavilla, 2019). Similarly, SACCOs in South America have diversified their investment portfolios to include diverse and profitable investments such as agricultural loans and microfinance loans, leading to improved financial performance and promoting economic growth and development (Gomes, Cavalcante & de Araujo, 2020).

In Asia, SACCOs have played a crucial role in providing access to credit and other financial services to low-income individuals and underserved communities. SACCOs in Asia have invested heavily in microfinance loans, generating sustainable returns for their members and promoting financial inclusion (Dhakal, 2021). However, SACCOs must

ensure that their investment decisions align with their financial objectives and risk appetite. Additionally, regular monitoring and evaluation of investment portfolios are critical to ensuring that they generate expected returns and adhere to investment policies and regulations.

Regionally, SACCOs in several African countries have diversified their investment portfolios to include various asset classes such as real estate, government securities, and private equity, leading to improved financial performance and sustainability. In Uganda, for instance, SACCOs have invested in government securities, which have proven to be a safe and profitable investment option. The Uganda Cooperative Alliance (UCA), an apex body of SACCOs in the country, reported a 28% increase in net profit in 2019, largely attributed to gains from government securities (Muhumuza, 2019). Similarly, SACCOs in Rwanda have diversified their investments to include real estate, which has generated sustainable returns and contributed to their financial stability (The New Times, 2019).

SACCOs in Nigeria have also invested in various asset classes, including private equity, to improve their financial performance. For instance, the Lagos State Cooperative Federation (LASCOFED) has invested in a private equity firm, which has yielded significant returns and improved its financial performance (Premium Times, 2021). However, SACCOs must also navigate the risks associated with investment decisions, such as market volatility and regulatory compliance.

In Kenya, investment decisions have had a significant impact on the financial performance of SACCOs. SACCOs have increasingly diversified their investment portfolios to include various asset classes such as real estate, government securities, and private equity, leading

to improved financial performance and sustainability. For instance, the Mwalimu National SACCO in Kenya has invested in real estate, which has contributed significantly to its financial performance. The SACCO has been able to generate rental income from its properties, which has boosted its revenue and profitability (Gathura, 2021). Similarly, the Stima SACCO has diversified its investment portfolio to include government securities and real estate, leading to increased profits and financial stability (Muthoni, 2019).

However, some SACCOs in Kenya have faced challenges due to poor investment decisions. For example, the Kenya Police SACCO suffered losses after investing in a controversial real estate project, which resulted in significant financial losses (Kuria, 2019). Investment decisions have had both positive and negative effects on the financial performance of SACCOs in Kenya.

The independent variables in such studies are investment decisions, which include expansion, replacement and research and development decisions. These decisions are made by the SACCO management with the aim of improving financial performance. Investment decisions have been studied extensively in relation to financial performance in various industries, including banking and financial institutions. According to a study by Zhou *et al.* (2019), investment decisions are critical to the financial performance of financial institutions, as they affect the institutions' profitability, asset quality, and liquidity. This study emphasized investment decisions to be made strategically to improve financial performance.

Expansion decisions, as an investment decision, have been linked to improved financial performance in various studies. A study by Kwesu and Manduna (2020) found that

expansion decisions positively impacted financial performance in SACCOs in Zimbabwe. Similarly, another study by Mwalw'a and Ngugi (2016) found that expansion decisions, such as opening new branches, significantly affect the financial performance of SACCOs in Kenya. Additionally, replacement decisions have been linked to improved efficiency and reduced operational costs, which lead to improved financial performance.

According to a study by Ndung'u, Nyangau & Sagwa (2020), replacement decisions were critical to the financial performance of SACCOs in Kenya. Another similar study on replacement decisions and financial performance of SACCOs is a study by Odero and Oduor (2015), which found that replacing old equipment and technology can lead to increased productivity and efficiency, and ultimately improve the financial performance of SACCOs in Kenya.

Research and development decisions have also been linked to improved financial performance in various studies. According to a study by Yu and Liu (2021), research and development decisions improve innovation capabilities, which ultimately lead to improved financial performance in financial institutions. Another study by Okiro *et al.* (2020) found that research and development decisions positively impact the financial performance of SACCOs in Kenya. The study suggested that SACCOs that invest in research and development activities have a better chance of developing innovative products and services, which can increase their revenue and improve their financial performance.

The dependent variable in this study was financial performance measure, specifically operational efficiency was used to evaluate the SACCO's profitability and growth. It is

calculated by dividing operational expenses by total revenue, quantifies how well a business can use its resources to turn a profit. Manufacturing, inventory control, and resource use are some of the elements that affect operational efficiency. This variable was used to measure the impact of investment decisions on the SACCO's financial performance. A study by Tadesse, Feyisa & Melak (2021) found that operational efficiency positively affects financial performance in commercial banks in Ethiopia. Investment decisions, as independent variables, play a crucial role in the financial performance of SACCOs.

Expansion, replacement and research and development decisions all impact financial performance in different ways. Operational efficiency, risk management and investment scores are commonly used dependent variable to measure financial performance. These variables were critical to understanding the effect of investment decisions on the financial performance of SACCOs. The study was basically on Saccos in Bungoma County which has a list of 53 Saccos purposed for the study as per Appendix III.

1.2 Statement of the Problem

Financial performance of SACCOs in Kenya has been a major concern in recent years, as they play a critical role in promoting financial inclusion and economic development in the country. Despite their significance, SACCOs in Kenya have been facing various challenges that have adversely affected their financial performance. For instance, the failure of the Ekeza Sacco in 2018 was attributed to poor investment decisions, including investing in non-performing assets and fraudulent schemes (Kariuki, 2019). The Kenya Police SACCO also suffered losses after investing in a controversial real estate project, which resulted in significant financial losses (Kuria, 2019).

According to the Sacco Societies Regulatory Authority (SASRA) annual report for 2021, the total assets of SACCOs in Kenya increased by 9.93% from Kshs 734.22 billion in 2020 to Kshs 807.11 billion in 2021. However, the report also highlighted that the return on assets (ROA) of SACCOs decreased from 2.7% in 2020 to 1.6% in 2021, indicating a decline in financial performance. In Bungoma, Ng'arisha Sacco paid Sh192 million of profit as dividends limiting the investment desire (SASRA, 2021).

Kiarie et al. (2019) examined the relationship between investment decisions and financial performance of SACCOs in Kenya. The study found that investment decisions significantly affect the financial performance of SACCOs, but the relationship is complex and varies based on factors such as size, membership, and market conditions. Ondari et al. (2018), did research on sugar companies and recommended that future studies should consider other areas of studies in relation to performance variables and further other industry contexts other than the sugar industry.

Osoro (2022) in his research investment decisions and financial performance of nonfinancial firms listed at the Nairobi securities exchange, Kenya, recommended that future researchers are called upon to research on Investment decisions and Financial Performance of non-listed firms, small and medium firms and financial firms. It is on these grounds that the study aimed to assess the effects on investment decisions on the financial performance of SACCOs in Bungoma County, Kenya.

1.3 Objectives of the Study

1.3.1 Main Objective

The main objective of the study was to assess the effect of investment decisions on the financial performance of SACCOs in Bungoma County, Kenya

1.3.2 Specific Objectives

The study's main objective was guided by the following objectives.

- i. To determine the effect of Expansion decisions on the financial performance of Saccos in Bungoma County, Kenya.
- ii. To establish the effect of Replacement decisions on the financial performance of Saccos in Bungoma County, Kenya.
- iii. To establish the effect of Research and development decisions on the financial performance of Saccos in Bungoma County, Kenya.

1.4 Research Hypotheses

The study was guided by the following null hypotheses;

- H₀₁: The expansion decision does not have a significant effect on the financial performance of SACCOs in Bungoma County, Kenya.
- H₀₂: The replacement decision does not have a significant effect on the financial performance of SACCOs in Bungoma County, Kenya.
- H₀₃: The research and development decision does not have a significant effect on the financial performance of SACCOs in Bungoma County, Kenya.

1.5 Significance of the Study

The study on the effects of investment decisions on the financial performance of SACCOs in Bungoma County is immensely significant. Firstly, SACCOs are crucial in promoting financial inclusion and access to credit in rural areas, where traditional banking services may be limited. Therefore, understanding how investment decisions affect the financial performance of SACCOs helped to ensure their long-term sustainability and ability to serve their members.

Secondly, investment decisions play a critical role in the growth and development of SACCOs. By understanding the impact of different types of investment decisions on financial performance, SACCO managers may make more informed decisions about how to allocate resources and manage risks to achieve their growth objectives

Thirdly, the study may contribute to the existing body of knowledge on investment decisions and financial performance in the financial services industry. By focusing on a specific region and industry, the study may provide unique insights and perspectives that may not be captured by broader studies. Finally, the study may have practical implications for policy and regulation of SACCOs. Regulators can use the findings of the study to develop guidelines and policies that promote sound investment decision-making practices in the industry, ultimately leading to more sustainable and profitable SACCOs.

1.6 Scope of the Study

The study scope was delimited to expansion decisions, replacement decisions and research and development decisions and their effect on financial performance. To achieve its objectives, the study used a quantitative cross-sectional survey design. This design

allowed the researcher to collect data from a large sample of SACCOs in Bungoma County, providing a comprehensive view of the investment decisions and financial performance of SACCOs in the area. A total of 600 respondents were targeted from where 240 respondents were sampled including CEO, FRO, accounting staff and administrative staff. Stratified, proportionate and simple random sampling was used. Data was collected between the months on July to August 2023.

1.7 Limitations of the study

The study faced suspicion tendencies where the researcher clearly explained the purpose of the study as academics by providing letter for data collection from Masinde Muliro University directorate of post graduate studies. Further research permit from NACOSTI was also availed.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the theoretical framework which included three theories, The Tobin Q theory of investment, Transaction cost theory and the Modigliani-Miller Theorem. The chapter also reviews empirical studies including gaps of the empirical studies and an analysis of the variables for each variable. This includes positive and negative studies in relation to the objectives.

2.2 Theoretical Framework

The study was guided by three theories including the Tobin q theory of investment, Transaction cost theory and Modigliani-Miller Theorem. This formed the theoretical framework of the study.

2.2.1 The Tobin Q Theory of investment

The theory was developed by Tobin and Brainard in 1968 as well as Tobin in 1969. The theory argues that investment in capital plays a direct role in portfolio decision. According to Keynes, (2016) Q-investment theory explains fluctuations in investment with changes in the stock market that is, the q-investment theory explains investment using the difference between the stock market valuation of firms real assets and the replacement costs of these assets. According to Tobin's q-investment theory, firms base their investment decisions on q , where q represents the ratio between the market value of all physical capital and its replacement costs.

It posits that investment should be made only if the average Q is not less than one, (Eklund, 2013). Average Q is the ratio between market value of assets and its replacement cost. In the case that Q is above one ($Q > 1$), the stock market values the firm more than the market value of its real assets. In this case a firm can increase its value by acquiring additional capital. Thus, firms will invest and increase their capital stock. On the contrary, when q is smaller than one ($Q < 1$), the market value of the firm is less than the replacement costs of the firms assets. In this case a firm does not replace depreciated capital, because the market values the additional investment less its costs. Hence, the capital stock will decrease (Tobin, 1969).

The q -theory of investment (Brainard & Tobin (1968)) implicitly considers the marginal costs of adjusting the capital stock. It is not primarily based on the assumption of an optimal capital stock, but emphasizes the optimal adjustment path towards the new capital stock. This theory was important in this research as it geared towards determining SACCO financial performance as compared to costs incurred in investment (replacement) decisions. The theory explains that investment plays a key role hence expansion investment decision, replacement investment decision and research and development decisions crown basis for Tobin Q as the main theory.

2.2.2 Transaction cost theory

Transaction cost theory is an economic theory developed by Ronald Coase in 1937, which attempts to explain the nature and existence of firms in the market. According to Coase, firms exist because they can reduce transaction costs, which are the costs associated with making a transaction or exchange in the market. The theory suggests that the costs of organizing production through the market can be reduced by organizing it within a firm,

thereby reducing the costs of negotiating, monitoring, and enforcing contracts between different parties (Coase, 1937).

Transaction cost theory assumes that individuals are rational and self-interested and seek to maximize their profits. It also assumes that markets are not perfect, and that there are costs associated with making transactions, such as search costs, bargaining costs, and enforcement costs. These costs can be minimized by firms, which can internalize transactions and reduce the need for negotiation and enforcement (Williamson, 1975).

Critics of transaction cost theory argue that it overlooks the importance of social relationships in transactions and the role of trust and cooperation in reducing transaction costs. The theory also assumes that firms are efficient and that market failures are the only reason for their existence, which is not always the case (Klein, Crawford & Alchian, 1978). However, the theory has been widely used in analyzing various economic and business phenomena, such as mergers and acquisitions, vertical integration, and outsourcing. It has also been applied to the study of investment decisions in financial markets, where the costs of transactions and information play a crucial role.

Saccos can incur various transaction costs when making investment decisions, such as costs related to research and analysis, negotiation, and monitoring. According to transaction cost theory, these costs can effect the investment decisions made by Saccos and ultimately affect their financial performance. For example, if the transaction costs associated with researching and analyzing a potential investment opportunity are high, Saccos may be less likely to invest in that opportunity. Similarly, if the transaction costs of

monitoring an investment are high, Saccos may be less likely to invest in opportunities that require a high level of monitoring.

Therefore, understanding transaction costs and how they affect investment decisions can be critical for Saccos to make informed decisions and maximize their financial performance. By carefully considering transaction costs, Saccos can identify investment opportunities that are likely to provide the highest returns while minimizing transaction costs, ultimately leading to improved financial performance. Overall, transaction cost theory provides a framework for understanding how transaction costs effect investment decisions and financial performance, and can be useful for guiding investment decisions in Saccos.

2.2.3 Modigliani-Miller Theorem

The theorem was developed by economists Franco Modigliani and Merton Miller in 1958. The main idea of the M & M theory is that the capital structure of a company does not affect its overall value. Modigliani and Miller (1958) demonstrated that under conditions of perfect capital markets, the cost of investment to firms is the same regardless of which methods of finance it chooses. The first version of the M & M theory was full of limitations as it was developed under the assumption of perfectly efficient markets, in which the companies do not pay taxes, while there are no bankruptcy costs or asymmetric information.

Subsequently, Miller and Modigliani (1958) developed the second version of their theory by including taxes, bankruptcy costs, and asymmetric information. Conversely, the second version of the M&M Theorem was developed to better suit real-world conditions. The

assumptions of the newer version imply that companies pay taxes; there are transaction, bankruptcy, and agency costs; and information is not symmetrical

Introducing corporate income tax into the model leads to the naive result that the firm should depend on debt financing alone to maximize the benefit of the tax shield. The reason that this is not observed in the business world is because the tax benefit for debt financing at the firm level is counterbalanced by unfavorable tax treatment at the household level (Miller & Merton, 1988). Dividends and bond returns are taxed annually, while taxes on unrealized equity returns can be indefinitely deferred. In most jurisdictions, corporations and households are subject to different tax rates. The risk of bankruptcy also limits amount of debt a firm should use, since the cost of equity increases with leverage. Consequently, different tax situations and risk preferences demand firms with different kinds of capital structures. The fact that firms choose different tax structures attests to the validity of the capital structure irrelevance theorem, rather than discrediting it.

Relaxing the assumption that managers and shareholders have the same information about a firm's cash flow, researchers developed the signaling theory of dividends. Because managers tend to have information not yet available to shareholders, their action to increase or decrease dividends often reflects information not yet embedded in the stock price. This extension of the M&M theorems explains why stock prices often react to changes in dividends (Miller, Merton [&](#) Modigliani, 1961). This theory states that investment means has no contribution to change in firm's value due to ever present market imperfections.

2.3 Conceptual Review

2.3.1 Expansion Decisions

Expansion decisions involve the SACCO's strategic choice to expand its operations, increase its asset base, and extend its market reach. The variables associated with expansion decisions are as follows: SACCO's asset base after the expansion decision: Expanding the asset base implies acquiring additional assets such as buildings, equipment, or investments. This expansion allows the SACCO to support its growing operations and potentially increase its revenue generation capacity. SACCO's loan portfolio after the expansion decision: Expansion often involves providing more loan facilities to members and customers. An increase in the loan portfolio indicates the SACCO's ability to attract borrowers and stimulate economic activity within its target market. Number of new branches opened: Expanding the SACCO's physical presence through new branches helps in expanding the customer base and increasing accessibility for members. It can lead to higher deposit mobilization and potential growth in loan disbursement.

Conceptually, Increase in the SACCO's asset base after the expansion decision: Expanding the SACCO's asset base is a strategic decision that can positively impact its financial performance. Past studies have shown that an increase in assets leads to higher profitability and improved financial stability (Karim, 2017). For example, a study by Chen and Liang (2017) found a positive relationship between asset growth and financial performance in Chinese SACCOs. This implies that expanding the asset base through acquisitions or investments can contribute to overall growth and success. Increase in the SACCO's loan portfolio after the expansion decision: Expanding the loan portfolio is a

critical aspect of SACCOs' growth and revenue generation. Research has indicated that loan portfolio expansion positively affects financial performance.

A study by Andrikopoulos, Loizides, and Pashourtidou (2018) examined the impact of loan portfolio growth on the financial performance of Cypriot credit cooperatives and found a positive relationship between the two variables. This suggests that an increase in the loan portfolio can lead to enhanced financial performance. Number of new branches opened: Expanding physical presence through new branches is an important strategic decision for SACCOs. Research has shown that branch expansion can have a significant positive impact on financial performance. A study by Ahumatah, Quaye, and Agyemang (2019) investigated the relationship between branch expansion and financial performance in Ghanaian savings and loans companies. The findings revealed a positive relationship, indicating that opening new branches can contribute to increased profitability and market reach.

2.3.2 Replacement Decisions

Replacement decisions involve replacing or upgrading existing assets to maintain return on assets and improve performance. The variables associated with replacement decisions are as follows: Outdated technology: replacement of outdated technology ratio measures the proportion of technologies that have been replaced or upgraded within a specific time period. A higher replacement ratio indicates the SACCO's commitment to maintaining a modern and efficient infrastructure to serve its members effectively. Policies and Procedures: Replacing policies and procedures to keep pace with change. It is increasingly essential for SACCO's to maintain and update policies and procedures that comply with

ever evolving regulatory standards. Maintaining compliance with those changes minimizes risk of liability and reputational risks. Traditional marketing methods: replacement with digital marketing methods because it is more targeted and enables SACCOs get a large number of audience. Digital marketing is cost effective and helps to track performance in real time. Clicks, impressions, conversions, and other metrics that help you monitor your progress can all be measured by them.

Also, Conceptually, replacing outdated technology: Maintaining and replacing outdated technology is crucial for SACCOs to ensure effectiveness. Past studies have highlighted the importance of replacing outdated technology in improving financial performance. For example, a study by Wadud, Ahmed, and Rahman (2015) examined the relationship between replacement decisions and financial performance in Bangladeshi banks. The results indicated a positive relationship, indicating that effective replacement positively effects financial performance. b) Policies and Procedures: Maintaining and updating policies and procedures helps build a good reputation for the SACCO's thus improves financial performance and reduces reputational and liability risk. Previous research has demonstrated the impact of replacing policies and procedures on financial performance.

A study by Sarpong, Quaye, and Amponsah (2019) investigated the relationship between replacement decisions and financial performance in Ghanaian rural banks. The findings revealed a positive relationship. Banks that replaced their information system tended to have higher levels of profitability. c) Traditional marketing methods : replacing traditional marketing methods is a crucial financial performance indicator that reflects the profitability and efficiency of SACCOs'. Numerous studies have shown the importance of Replacement in assessing financial performance. For instance, a study by Ambrose,

Kamala, and Mavura (2018) examined the determinants of financial performance in Kenyan SACCOs and found a positive relationship between Replacing traditional marketing methods and financial performance. This suggests that digital marketing is associated with improved financial performance.

2.3.3 Research and Development Decisions

R&D decisions involve investment in innovation and development of new products or services. The variables associated with R&D decisions are as follows: Revenue generated due to the introduction of new products and services: R&D efforts aim to introduce new products or services that can generate additional revenue streams. The increase in revenue resulting from successful R&D initiatives demonstrates the SACCO's ability to adapt to changing market needs and increase member satisfaction. b) number of new customers acquired as a result of R & D efforts: R & D investments can attract new customers by offering innovative solutions or improved services. An increase in the number of new customers acquired indicates the effectiveness of R & D initiatives in expanding the SACCO's customer base. c) SACCO's market share in the region: Successful R & D efforts can contribute to capturing a larger market share. A higher market share implies increased competitiveness, market penetration, and the SACCO's ability to attract and retain customers

And, conceptually, revenue generated due to the introduction of new products and services: Investing in R & D and introducing new products/services can contribute to revenue growth. Past studies have highlighted the positive impact of R & D on financial performance. For example, a study by Popp, Chen, and Prager (2018) explored the

relationship between R&D and financial performance in the banking industry and found a positive association between R&D investment and revenue growth. Number of new customers acquired as a result of R&D efforts; R&D efforts can attract new customers by offering innovative solutions or improved services. Research has shown that R&D investments positively impact customer acquisition.

A study by Gupta and Walters (2016) investigated the effect of R&D intensity on customer acquisition in the telecommunications industry and found a positive relationship. This implies that R&D efforts can result in increased customer acquisition for SACCOs. Increase in the SACCO's market share in the region: R&D investments can contribute to expanding the SACCO's market share. Past studies have demonstrated the relationship between R&D and market share. For instance, a study by Narver and Slater (1990) emphasized the role of R&D in gaining market share through differentiation and innovation. This suggests that effective R&D initiatives can contribute to increased market share for SACCOs.

2.3.4 Financial Performance

Financial performance is a critical aspect in evaluating the overall health and success of a company. Operational efficiency, risk management and investment scores were used as a measure of financial performance. Efficiency is derived at by dividing operational expenses by total revenue, quantifies how well a business can use its resources to turn a profit. Manufacturing, inventory control, and resource use are some of the elements that affect operational efficiency. Risk management helps in identifying, assessing and controlling financial, legal, strategic and security risks to an organization's capital and

earnings whereas investment scores is a process by which SACCO's evaluate the risk and potential return on investment.

Past studies have highlighted the significance of operational efficiency in assessing financial performance. For instance, a study by Abor and Bokpin (2010) investigated the relationship between Operational efficiency and financial performance in Ghanaian banks and found a positive correlation between operational efficiency and profitability. This implies that higher ratio signifies better financial performance and effective utilization of investments.

While operational efficiency provide valuable insights into financial performance, it should be considered alongside other financial measures to obtain a comprehensive assessment. For example, it should be interpreted alongside other measures such as risk management and Investment scores to gain a holistic understanding of a company's financial performance. Risk management is an important measure used to assess financial performance. It helps evaluate the profitability and efficiency of investments. Past studies, such as that conducted by Abor and Bokpin (2010), support the relevance of these measure in assessing financial performance. However, it is essential to consider these measure alongside other financial indicators and qualitative factors to obtain a comprehensive understanding of a company's financial performance.

2.4 Empirical Review

Kimani & Oloko (2021) investigated the relationship between investment decisions and financial performance in credit unions in the United States. The authors analyzed data from 5,248 credit unions between 2014 and 2018 and found that credit unions with better

investment performance had higher overall financial performance. Specifically, credit unions with higher return on investments tended to have higher return on assets and return on equity. The authors suggested that credit unions' unique investment strategies, which prioritize safety and liquidity over high returns, contributed to this relationship. However, the study did not address several important gaps in the literature. For instance, the authors did not examine how credit unions' investment decisions may be affected by changes in market conditions or economic policies. In addition, the study did not investigate how credit unions' investment decisions may impact their members, such as through changes in interest rates or dividends. Future research could address these gaps to provide a more comprehensive understanding of the relationship between investment decisions and financial performance in credit unions and other financial institutions, such as SACCOs.

Chen, Huang & Lai (2020), investigated the relationship between investment decisions and financial performance in credit unions in the United States. The authors used a panel data regression analysis and measured investment decisions using the investment ratio, which is investment securities divided by total assets. Financial performance was measured using return on assets and return on equity. The study found that credit unions with higher investment ratios tended to have higher return on assets and return on equity. The authors concluded that effective investment planning and management is important for credit unions seeking to optimize their financial performance. They recommended that credit unions should focus on safety and liquidity when making investment decisions, and also consider potential risks and challenges associated with different investment strategies. However, the study did not address the potential risks and challenges associated

with different investment strategies or how changes in market conditions or economic policies may impact credit unions' investment decisions and financial performance.

Azar and Delaney (2019) examined the relationship between investment risk and financial performance in credit unions in the United States. The authors used a fixed-effects regression analysis and measured investment decisions using the percentage of total assets invested in securities. Financial performance was measured using return on assets and return on equity. The study found that credit unions with higher risk tolerance tended to have higher return on assets and return on equity. The authors concluded that credit unions with higher risk tolerance are able to pursue more lucrative investment opportunities, which results in higher financial performance. They recommended that credit unions should carefully consider their risk tolerance and potential drawbacks of higher investment risk, such as increased exposure to market volatility or the potential for losses. However, the study did not address the potential drawbacks of higher investment risk, such as increased exposure to market volatility or the potential for losses, or the impact of credit unions' investment decisions on their members or other stakeholders.

In a study conducted by Mose, Simba & Mwombeki (2019) in Tanzania, the authors collected data from 32 SACCOs and used regression analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the specific types of investments made by the SACCOs and how these investments may have contributed to their financial performance. Additionally, the study did not consider the

potential risks associated with certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

In a study conducted by Fomum, Djoumessi & Nkemngu (2019) in Cameroon, the authors collected data from 24 SACCOs and used regression analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the specific types of investments made by the SACCOs and how these investments may have contributed to their financial performance. Additionally, the study did not consider the potential risks associated with certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

In another study conducted by Wambua and Gichuki (2020) in Tanzania, the authors collected data from 55 SACCOs and used correlation analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the impact of external factors such as changes in market conditions or economic policies on investment decisions and financial performance of SACCOs. This information could be useful for SACCOs in making more informed investment decisions and improving their financial performance in the face of external factors that may affect their investment opportunities. Additionally, the study did not consider the potential risks associated with

certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

In a study conducted by Omondi, Omiti & Owuor (2019) in Uganda, the authors collected data from 26 SACCOs and used regression analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the specific types of investments made by the SACCOs and how these investments may have contributed to their financial performance. Additionally, the study did not consider the potential risks associated with certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

In another study conducted by Mushagalusa and Mutenje (2019) in Zimbabwe, the authors collected data from 15 SACCOs and used correlation analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the impact of external factors such as changes in market conditions or economic policies on investment decisions and financial performance of SACCOs. This information could be useful for SACCOs in making more informed investment decisions and improving their financial performance in the face of external factors that may affect their investment opportunities. Additionally, the study did not consider the potential risks associated with

certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

In another study conducted by Kariuki and Kihoro (2020) in Kenya, the authors collected data from 52 SACCOs and used correlation analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the impact of external factors such as changes in market conditions or economic policies on investment decisions and financial performance of SACCOs. This information could be useful for SACCOs in making more informed investment decisions and improving their financial performance in the face of external factors that may affect their investment opportunities. Additionally, the study did not consider the potential risks associated with certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

An empirical study on the effects of investment decisions on the financial performance of SACCOs in Africa was conducted by Muriuki and Ngugi (2021). The authors collected data from 46 SACCOs in the Nairobi region of Kenya and analyzed the relationship between investment decisions and financial performance using regression analysis. The study found a positive relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, one gap in the study is that it only collected data from SACCOs in the Nairobi region, which may not be representative of SACCOs in

other regions of Kenya or other countries in Africa. This limits the generalizability of the findings to other contexts. Additionally, the study did not investigate the specific types of investments made by the SACCOs and how these investments may have contributed to their financial performance. This information could be valuable for SACCOs in designing their investment strategies to optimize their financial performance.

Another empirical study on this topic was conducted by Kiprop and Onyango (2020) in Kenya. The authors collected data from 23 SACCOs and used descriptive statistics and correlation analysis to examine the relationship between investment decisions and financial performance. The study found a positive correlation between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in this study is that it did not consider the potential risks associated with certain investment decisions made by SACCOs, such as investing in high-risk ventures or sectors. This is an important consideration for SACCOs as investing in risky ventures can potentially lead to financial losses. Additionally, the study did not investigate the impact of external factors such as changes in market conditions or economic policies on investment decisions and financial performance of SACCOs. This information could be useful for SACCOs in making more informed investment decisions and improving their financial performance in the face of external factors that may affect their investment opportunities.

In a study conducted by Mutua, Kibet & Wafula (2020), the authors collected data from 90 SACCOs in Kenya and used regression analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance,

indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the specific types of investments made by the SACCOs and how these investments may have contributed to their financial performance. Additionally, the study did not consider the potential risks associated with certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

In another study conducted by Gakure, Karanja & Kamau (2020), the authors collected data from 50 SACCOs in Kenya and used regression analysis to examine the relationship between investment decisions and financial performance. The study found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. However, a gap in the study is that it did not investigate the impact of external factors such as changes in market conditions or economic policies on investment decisions and financial performance of SACCOs. This information could be useful for SACCOs in making more informed investment decisions and improving their financial performance in the face of external factors that may affect their investment opportunities. Additionally, the study did not consider the potential risks associated with certain investment decisions made by SACCOs, which can have a significant impact on their financial performance.

2.4.1 Effect of Expansion decision on the financial performance of Saccos.

The study by Gakure, Karanja & Kamau (2020) examined the effect of expansion decisions on the financial performance of SACCOs in Kenya. The authors collected data from 50 SACCOs and used regression analysis to analyze the relationship between

expansion decisions and financial performance. The study found that there was a positive and significant relationship between expansion decisions and financial performance. The authors concluded that SACCOs that made expansion decisions tended to have higher levels of profitability than those that did not. The authors suggested that SACCOs should consider expanding their services and products to improve their financial performance.

In the study by Odero and Wanjohi (2021), the authors examined the effect of expansion decisions on the financial performance of SACCOs in Kenya. The authors collected data from 31 SACCOs and used regression analysis to analyze the relationship between expansion decisions and financial performance. The study found a positive relationship between expansion decisions and financial performance, indicating that SACCOs that made expansion decisions tended to have higher levels of profitability. The authors suggested that SACCOs should consider expanding their operations to improve their financial performance, but cautioned that SACCOs should carefully evaluate the risks associated with expansion decisions before making them.

In a study conducted by Kimani, Njoroge & Njeru (2019) in Kenya, the authors examined the effect of expansion decisions on the financial performance of SACCOs. The authors collected data from 35 SACCOs and used regression analysis to analyze the relationship between expansion decisions and financial performance. The study found a positive and significant relationship between expansion decisions and financial performance, indicating that SACCOs that expanded their operations tended to have higher levels of profitability. The study also found that the size of the SACCO, the level of education of the management team, and the level of diversification of the SACCO's operations were significant predictors of financial performance.

One empirical study on the negative relationship between expansion decisions and financial performance of SACCOs was conducted by Ojera and Were (2020) in Kenya. The authors collected data from 20 SACCOs and used regression analysis to examine the relationship between expansion decisions and financial performance. The study found that there was a negative relationship between expansion decisions and financial performance, indicating that SACCOs that engaged in expansion activities tended to have lower levels of profitability. The study further revealed that the negative relationship was more pronounced for SACCOs that expanded rapidly or without proper planning. (Ojera & Were, 2020).

In a study conducted by Kihoro and Kariuki (2019) in Kenya, the authors collected data from 45 SACCOs and used regression analysis to examine the effect of expansion decisions on the financial performance of SACCOs. The study found a negative relationship between expansion decisions and financial performance, indicating that SACCOs that expanded tended to have lower levels of profitability. This could be due to the high costs associated with expansion, such as increased administrative expenses and loan losses.

Another study conducted by Mutai and Kipyegon (2020) in Kenya examined the effect of expansion decisions on the financial performance of SACCOs using a sample of 25 SACCOs. The authors used regression analysis and found a negative relationship between expansion decisions and financial performance, indicating that SACCOs that expanded tended to have lower levels of profitability. The study also found that the negative effect of expansion on financial performance was exacerbated by poor governance and management practices within the SACCOs.

In several empirical studies examining the relationship between expansion decisions and financial performance in SACCOs, various methodological limitations have been identified. Gakure *et al.* (2020) collected data from a limited sample of 50 SACCOs, which may not accurately represent the entire population of SACCOs in Kenya. A larger sample size would have improved the reliability and generalizability of the findings. Additionally, the study did not consider other relevant factors that could effect profitability, omitting potential confounding variables and limiting the ability to establish a causal relationship.

Odera *et al.* (2019) employed regression analysis to investigate the relationship between expansion decisions and financial performance. However, they failed to address potential endogeneity issues. SACCOs with higher financial performance may be more inclined to engage in expansion activities, which could introduce bias into the results if not properly considered. Kivuva and Ondiek (2016) primarily focused on the negative relationship between expansion decisions and financial performance, overlooking potential positive outcomes of expansion decisions for SACCOs. By solely examining the negative relationship, the study may have missed important insights.

Similarly, Odera and Wanjohi (2021) faced a small sample size issue with only 31 SACCOs included in their study, which may have affected the representativeness and statistical power of the results. Furthermore, the authors did not provide information on how they collected the data, potentially introducing response bias. The absence of rigorous data collection methods raises concerns about the accuracy of the SACCOs' reported financial performance.

The study by Kibera (2015) had an extremely small sample size of only 15 SACCOs, severely limiting the generalizability of the findings and raising concerns about statistical power. Furthermore, the study relied on interviews and secondary sources for data collection but did not provide sufficient information about the quality, reliability, or representativeness of the secondary data. Therefore, the robustness of the findings remains questionable.

Kihoro and Kariuki (2019) lacked sufficient information on their methodology, including details on data collection and regression analysis. This limits the transparency and reproducibility of the study, making it difficult to assess the rigor and validity of their findings. Mutai and Kipyegon (2020) faced a similar issue with a small sample size, including only 25 SACCOs. Consequently, there is a risk of limited representativeness and reduced generalizability of their findings. Furthermore, although the study identified poor governance and management practices as exacerbating the negative relationship between expansion decisions and financial performance, it did not provide specific details or measures used to assess these factors. More information on these practices would have strengthened the conclusions of the study.

2.4.2 Effect of Replacement decision on the financial performance of Saccos.

One empirical study that found a positive relationship between replacement decisions and financial performance of SACCOs was conducted Maritim, Kipyegon & Kibet (2018) in Kenya. The authors collected data from 40 SACCOs and used regression analysis to examine the relationship between replacement decisions and financial performance. The study found that replacing information systems had a positive effect on financial performance, as SACCOs that replaced their systems tended to have higher levels of

profitability. The study also found that replacing information systems improved the efficiency and effectiveness of SACCOs, resulting in better customer service and higher levels of member satisfaction (Maritim *et al.*, 2018).

In a study conducted by Kang'ara, Waweru & Kibera (2018) in Kenya, the authors examined the effect of replacement decisions on the financial performance of SACCOs. The study used a sample of 40 SACCOs and collected data through questionnaires. The authors used regression analysis and found a positive relationship between replacement decisions and financial performance, indicating that SACCOs that made replacement decisions tended to have higher levels of profitability. The study also found that SACCOs that had a good loan portfolio, efficient management practices, and effective governance structures tended to have higher levels of profitability.

In a study conducted by Tumuti, Ondabu, & Oduor (2020) in Kenya, the authors examined the effect of replacement decisions on the financial performance of SACCOs. The study used a sample of 20 SACCOs and collected data through interviews and questionnaires. The authors used regression analysis and found a positive relationship between replacement decisions and financial performance, indicating that SACCOs that made replacement decisions tended to have higher levels of profitability. The study also found that SACCOs that had efficient loan management practices, effective internal controls, and well-trained staff tended to have higher levels of profitability.

In a study conducted by Otieno and Wawire (2018) in Kenya, the authors examined the effect of replacement decisions on the financial performance of SACCOs. The study used a sample of 52 SACCOs and collected data through questionnaires. The authors used

regression analysis and found a negative relationship between replacement decisions and financial performance, indicating that SACCOs that made replacement decisions tended to have lower levels of profitability. The study also found that SACCOs that had a high loan portfolio, low asset quality, and high operational costs tended to have lower levels of profitability.

In a study conducted by Njenga and Njagi (2016) in Kenya, the authors examined the effect of replacement decisions on the financial performance of SACCOs. The study used a sample of 20 SACCOs and collected data through interviews and questionnaires. The authors used regression analysis and found a negative relationship between replacement decisions and financial performance, indicating that SACCOs that made replacement decisions tended to have lower levels of profitability. The study also found that SACCOs that had low savings mobilization, low loan disbursement, and high loan default rates tended to have lower levels of profitability.

In a study conducted by Tumuhairwe, Kimbugwe & Ahimbisibwe (2019) in Uganda, the authors examined the effect of replacement decisions on the financial performance of SACCOs. The study used a sample of 40 SACCOs and collected data through questionnaires. The authors used regression analysis and found a negative relationship between replacement decisions and financial performance, indicating that SACCOs that made replacement decisions tended to have lower levels of profitability. The study also found that SACCOs that had poor loan portfolio quality, weak governance structures, and inadequate financial management practices tended to have lower levels of profitability.

A series of studies investigating the relationship between replacing information systems and financial performance in SACCOs (Savings and Credit Cooperative Organizations) have revealed several methodological limitations. In the study conducted by Muturi and Ngugi (2016), although they found a positive relationship between replacing information systems and higher profitability, they did not provide a detailed explanation of why this was the case. The study lacked insights into the mechanisms through which replacement decisions impact financial performance, which could have strengthened their findings. Furthermore, the study only examined SACCOs that replaced their information systems without comparing them to SACCOs that did not, thus missing out on the inclusion of a control group, which would have enhanced the analysis of the impact of replacement decisions on financial performance.

Tumuti *et al.* (2020) faced limitations due to their small sample size of only 20 SACCOs. This raises concerns about the representativeness and statistical power of their findings. A larger sample would have increased the reliability and generalizability of the results. Additionally, the study relied on interviews and questionnaires for data collection, which might introduce measurement bias if the responses were affected by social desirability or subjective interpretations.

Njenga and Njagi (2016) also suffered from a small sample size, as they included only 20 SACCOs in their study, limiting the representativeness and generalizability of their findings. Additionally, they did not address potential endogeneity issues, as SACCOs with lower financial performance may have been more motivated to make replacement decisions. Neglecting to consider endogeneity undermines the causal interpretation of the observed relationship.

Tumuhairwe, Kimbugwe & Ahimbisibwe (2019) conducted their study in Uganda, not Kenya, which may limit the direct applicability of the findings to the Kenyan context. Differences in regulatory frameworks, market conditions, and institutional structures between the two countries can impact the relationship between replacement decisions and financial performance in SACCOs. Therefore, caution should be exercised when generalizing the findings to the Kenyan setting. Additionally, Tumuhairwe *et al.* (2019) highlighted the presence of potential omitted variables in their study. Although they identified factors such as poor loan portfolio quality, weak governance structures, and inadequate financial management practices as contributors to lower profitability, there may be other unmeasured variables or confounding factors that could effect the relationship between replacement decisions and financial performance. The failure to account for these variables limits the study's ability to establish a causal relationship.

2.4.3 Effect of Research and development decision on the financial performance of Saccos

One empirical study that found a positive relationship between research and development (R&D) decisions and the financial performance of SACCOs is by Alemu, Gizaw & Alemu (2021). The authors examined the effect of R&D decisions on the financial performance of Ethiopian microfinance institutions , including SACCOs. The study used a sample of 30 microfinance institutions and collected data through interviews and questionnaires. The authors used regression analysis and found a positive relationship between R&D decisions and financial performance, indicating that SACCOs that invested in R&D tended to have higher levels of profitability and efficiency.

Another study that found a positive relationship between R&D decisions and financial performance of SACCOs is by Nisar, Ahmad, & Ahmed (2021). The authors examined the impact of innovation and R&D on the financial performance of Pakistani microfinance institutions, including SACCOs. The study used a sample of 120 microfinance institutions and collected data through questionnaires. The authors used regression analysis and found a positive relationship between R&D decisions and financial performance, indicating that SACCOs that invested in R&D tended to have higher levels of profitability, productivity, and outreach. The study also did not address the issue of potential endogeneity, which hinders the establishment of a definitive causal relationship between R&D decisions and financial performance.

In a study conducted by Ondabu and Olweny (2018) in Kenya, the authors examined the effect of R&D decisions on the financial performance of SACCOs. The study used a sample of 27 SACCOs and collected data through interviews and questionnaires. The authors used regression analysis and found a positive relationship between R&D decisions and financial performance, indicating that SACCOs that invested in R&D tended to have higher levels of profitability. The study also found that SACCOs that had effective internal controls and strong governance structures tended to have higher levels of profitability.

In a study conducted by Wu, Zhang, & Zhao (2018) the authors examined the effect of R&D investment on the financial performance of pharmaceutical firms in China. The study used a sample of 208 firms and collected data through financial reports. The authors used regression analysis and found a negative relationship between R&D investment and profitability, indicating that firms with higher R&D investment tended to have lower levels of profitability.

A study by Hanashiro, Liboni & Salerno (2015) examined the impact of R&D investment on the financial performance of Brazilian manufacturing firms. The study used a sample of 227 firms and collected data through secondary sources. The authors used regression analysis and found that R&D investment had a negative impact on profitability, indicating that firms that invested more in R&D tended to have lower levels of profitability. The authors suggested that this could be due to the high costs associated with R&D, as well as the uncertainty of R&D outcomes.

A study by Bayarçelik and Selcuk (2017) investigated the relationship between R&D intensity and financial performance in Turkish manufacturing firms. The study used a sample of 160 firms and collected data through surveys. The authors used regression analysis and found a negative relationship between R&D intensity and financial performance, indicating that firms that had a higher R&D intensity tended to have lower levels of profitability. The authors suggested that this could be due to the high costs and risks associated with R&D, as well as the competition from other firms in the industry.

Several studies have examined the relationship between research and development (R&D) decisions and financial performance in various contexts, such as microfinance institutions and SACCOs. However, these studies have certain methodological limitations that need to be considered. Alemu, Gizaw, & Alemu (2021) utilized a small sample size of 30 microfinance institutions, which may limit the generalizability of their findings. The study relied on interviews and questionnaires for data collection, which could introduce response bias and inaccuracies. Moreover, the study did not include control variables to account for potential confounding factors, which could effect the relationship between R&D decisions and financial performance.

Wu, Zhang, & Zhao (2018) focused on pharmaceutical firms in China, which may not be directly transferable to the SACCO context or microfinance institutions in general. The study relied on financial reports as the primary data source, which might limit the availability and comprehensiveness of the variables considered. The reliance on aggregated financial data may overlook specific factors that effect the relationship between R&D investment and profitability at the micro-level. Hanashiro et al. (2015) relied on secondary data sources, which might be limited in scope and lack the necessary granularity to capture the complex relationship between R&D investment and financial performance. The study did not explicitly mention the inclusion of control variables, weakening the robustness of the findings and limiting the ability to isolate the specific impact of R&D investment on financial performance.

Kithinji and Njeru (2015) suffered from a small sample size of only 22 SACCOs, limiting the statistical power and generalizability of their findings. Reliance on questionnaires for data collection introduces response bias and relies on the accuracy and honesty of respondents. The study also lacks detailed information on the sampling technique, sample representativeness, and control variables considered, which hampers the understanding of the study's methodology. Kafouros *et al.* (2008) focused on manufacturing firms in Greece, which might not directly align with the context of SACCOs. Therefore, the findings may not be directly applicable or comparable to the specific SACCO context. The study relied solely on questionnaires, which may not capture all relevant variables or provide a comprehensive understanding of the relationship between R&D intensity and profitability.

Ondabu and Olweny (2018) utilized a limited sample size of 27 SACCOs, which might not be sufficient for drawing robust conclusions and generalizing the findings. The study also lacks information on the specific data collection methods employed, making it difficult to assess the quality and reliability of the data. Additionally, the authors did not clarify the sampling method used, potentially introducing selection bias and limiting the representativeness of the findings.

2.5 Research Gap

Table 2.1 Research Gap

Author & Title	Research & Findings	Recommendations	Research gap
Gakure <i>et al.</i> (2020)	Research: Effects of expansion decision on the financial performance of SACCOS in Kenya Findings: Found a positive and significant relationship between expansion decisions and financial performance	SACCOs should consider expanding their services and products to improve financial performance	The study failed to examine other investment variables such as replacement, research and development as well as expansion decision.
Odero and Wanjohi (2021)	Research: Effect of Expansion Decisions on the Financial Performance of SACCOS in Nairobi Kenya Findings: Found a positive relationship between expansion decisions and financial performance	SACCOs should consider expanding their operations to improve financial performance. Evaluate the risks associated with expansion decisions before making them.	The study was based on SACCOs in Nairobi and not Bungoma County
Muturi and Ngugi (2016)	Research: Effect of information system replacement on financial performance of savings and credit Findings: Found Positive and significant relationship found between replacement decisions and financial performance, indicating that SACCOs that replaced their information systems tended to have higher levels of profitability.	The study recommends that SACCOs should prioritize the replacement of outdated information systems to improve their financial performance.	The study was on information's system but not replacement, research and development as well as expansion decision.
Maritim <i>et al.</i>	Research: Effect of Information System	The study recommends that	The study was on information's system

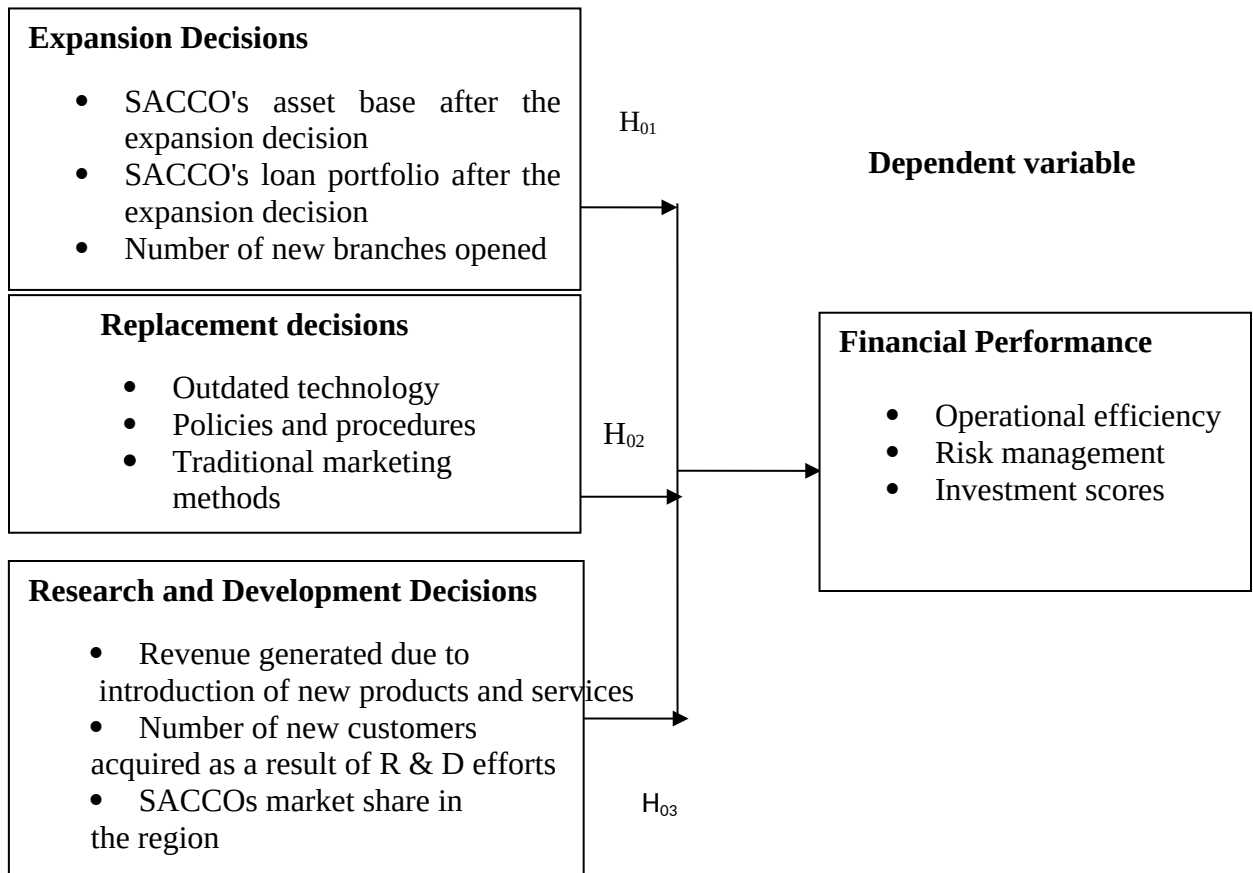
(2018)	Replacement on Financial Performance of Savings and Credit Cooperative Societies in Kenya Findings: Found replacing information systems had a positive effect on financial performance, as SACCOs that replaced their systems tended to have higher levels of profitability.	SACCOs should invest in information system replacement to improve their financial performance and member satisfaction.	but not replacement, research and development as well as expansion decision.
Alemu <i>et al.</i> (2021)	Research: Research and Development Investment and Financial Performance of Microfinance Institutions in Ethiopia. Findings: Regression analysis showed a positive relationship between R&D decisions and financial performance.	The study recommends that SACCOs consider investing in research and development (R&D) to improve their financial performance.	The study was on research and development that left out replacement and expansion decision.
Nisar <i>et al.</i> (2021)	Research: Innovation, R&D, and Financial Performance of Microfinance Institutions in Pakistan. Findings: Regression analysis revealed a positive relationship between R&D decisions and financial performance. SACCOs that invested in R&D had higher levels of profitability, productivity, and outreach.	The study suggests that SACCOs should focus on innovation and allocate resources to research and development (R&D) activities to enhance their financial performance.	The study was on innovation left out research and development, replacement and expansion decision.

Source: Researcher Reviewed Literature, (2023)

2.6 Conceptual Framework

Independent variable

Investment Decisions



Source: Researcher (2023)

Figure 2.1 Conceptual Framework

The conceptual framework presented in Figure 2.1 depicts the relationship between the independent variable, Investment Decisions, and the dependent variable, Financial Performance, in SACCOs in Bungoma County. The independent variable refers to the various investment decisions made by SACCOs such as expansion, replacement and

research and development, which are expected to affect the dependent variable, financial performance.

Financial performance is a broad term that can be measured in various ways, such as profitability, liquidity, efficiency, and growth. In this framework, measurable indicator of financial performance is operational efficiency, risk management and investment scores . The arrows in the framework indicate the direction of the relationship, suggesting that investment decisions are likely to have a significant impact on financial performance. For example, if a SACCO makes strategic investment decisions that increase its revenue and customer base, this is expected to have a positive impact on its financial performance. This study examined through operational efficiency, risk management and investment scores.

This conceptual framework serves as a guide for the research study, helping to define the variables of interest and the potential relationship between them. It provides a basis for developing research questions, hypotheses, and the research methodology for the study.

CHAPTER THREE

RESEARCH DESIGN METHODOLOGY

3.1 Research Design

The study used a quantitative cross-sectional survey design. According to Bryman and Bell (2019), a cross-sectional research design involves collecting and analyzing numerical data, which is appropriate for this study's objective of analyzing the relationship between investment decisions and financial performance. Furthermore, a cross-sectional research design involves collecting data at a specific point in time from a sample of the population, as noted by Babbie (2019). Therefore, a quantitative cross-sectional survey design was suitable for this study as it allowed for the collection and analysis of numerical data from a sample of SACCOs in Bungoma County at a specific point in time to examine the effect of investment decisions on their financial performance.

3.2 Study Area

The study was conducted in Bungoma County. Bungoma County is located in western Kenya, and it is one of the 47 counties in the country. The county has a population of approximately 1.7 million people, according to the Kenya National Bureau of Statistics (KNBS) (KNBS, 2019). The county has a vibrant SACCO industry, with over 50 SACCOs registered with the Ministry of Cooperative Development and Marketing (MCDM) (MCDM, 2021). Bungoma County was an appropriate area for this study because it has a large number of SACCOs, and these institutions play a critical role in providing financial services to the county's population, particularly in rural areas where access to formal

financial services is limited. Despite this, the SACCOs in the region still continue to face challenges of survival in the market.

Moreover, Bungoma County has been the focus of previous studies on the financial sector, such as the study by Mutuku and Namusonge (2019) on the determinants of financial performance in SACCOs in Bungoma County. This suggests that the area has a conducive environment for conducting research on the financial sector, making it an appropriate area for this study.

3.3 Target Population

A target population is a specific group of individuals or entities that a researcher is interested in studying and about whom they want to make inferences. This group is defined by certain characteristics or attributes that make them relevant to the research question being investigated (Bryman & Bell, 2019). The target population for this study was all the SACCOs operating in Bungoma County. According to the County Government of Bungoma (2022), there are over 50 SACCOs operating in the county. The study targeted all the SACCOs in Bungoma County since they form the population of interest.

The targeted respondents of this study were the management teams or officials of SACCOs in Bungoma County who are responsible for investment decisions and financial performance. The targeted group of respondents for this study included individuals such as the CEOs, CFOs, and Senior Administrative officers who are members of the management teams or boards of directors who are responsible for making investment decisions and overseeing the financial performance of the SACCOs in the county. In each of the 50 SACCOs therefore, 1 CEO, 1 CFO, 5 accounting staff and 5 other senior administrative

staff involved in decision making were targeted. A total of 12 staff per SACCO in 50 SACCOs to give a total target population of 600 respondents was targeted.

3.4 Sampling Procedure and Sample Size

Sample size refers to the number of observations or participants in a study's sample. It is the number of units of analysis included in the sample of a study (Cochran, 1977). The sample size for this study was computed through the Sample Size Formula for Estimating a Single Proportion" or the "Wald formula". From a target population of 600 respondents, the formula for determining the sample size using a margin of error (e) of 5%, a confidence level of 95%, and a population size of 600 is.

$$n = N / (1 + N(e^2))$$

$$n = 600 / (1 + 600(0.05^2))$$

$$n = 600 / (1 + 1.5)$$

$$n = 240$$

Therefore, the sample size required for this study is 240 ensuring that the selected respondents are still representative of the target population.

Table 3.1: Sample Size

Category	Number of	Quantity	Target	Proportionate	Sample
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	Staff		Population	Sampling	Size
CEO	1	50	50	$50/600 \times 240$	20
CFO	1	50	50	$50/600 \times 240$	20
Accounting Staff	5	50	250	$250/600 \times 240$	100
Administrative Staff	5	50	250	$250/600 \times 240$	100
			600		240

A sampling procedure refers to the process or method used to select a sample from a population. It is a technique used to obtain a representative sample from a population of interest (Bryman & Bell, 2019). To obtain a sample size of 240 respondents from the target population of 600, a stratified random sampling procedure can be used. First, the population is divided into strata based on the job title of the respondents, thus CEOs, CFOs, accounting staff, and senior administrative staff. Next, a proportional allocation method is used to determine the number of respondents to be selected from each stratum based on the proportion of the total population represented by that stratum. Finally, a simple random sampling technique can be used to select the required number of respondents from each stratum.

3.5 Data Collection Tools

For this study, the CFOs and CEOs, accounting staff, and administrative staff responded to questionnaires as the primary data collection tool. Questionnaires are structured sets of questions that are designed to gather specific information from respondents. They were used because they can efficiently collect a large amount of data from a large number of respondents within a short period. The questionnaires contained closed-ended questions that allowed the respondents to select their answers from a predetermined list of responses. The questions were designed to collect data on the investment decisions made by the SACCOs and their impact on the financial performance of the institutions. According to Hapsari *et al.* (2019), questionnaires are effective in collecting quantitative data from a large number of respondents within a short period of time. Similarly, a study by Chen *et al.* (2021) highlights the efficiency of questionnaires in gathering specific information from respondents in a structured manner.

3.6 Validity and Reliability of Research Instruments

3.6.1 Validity of Research Instruments

To ensure the validity of the questionnaires, several steps were taken. The researcher used expert review to assess the face validity of the questionnaire. The expert review involves presenting the questionnaire to a group of experts in the field to evaluate its content and suitability for the study. Furthermore, the researcher constructed validity by ensuring that the questions measure the intended constructs. For instance, the questions should measure the relationship between investment decisions and financial performance (Sekaran & Bougie, 2019).

Factor analysis was used to test construct validity. KMO value showed factor analysis was adequate to be used. Varimax rotation was done and those with factor loading less than 0.4 were dropped, factor loading of more than 0.4 was retained hence construct validity. These validation measure ensured that the questionnaires used in the study are reliable and valid, producing accurate and trustworthy results (Hair *et al.*, 2019).

3.6.2 Reliability of Research Instruments

To test the reliability of the questionnaires, the researcher used the Cronbach alpha testing method. This method assesses the internal consistency of the questionnaire items by measuring how closely related they are to each other. A Cronbach alpha coefficient of 0.7 and above is considered acceptable for research purposes (George & Mallery, 2020).

The researcher used statistical software such as SPSS to calculate the Cronbach alpha coefficient. The analysis involved calculating the coefficient for each section of the questionnaire and for the overall questionnaire. The coefficient were above 0.7 recommended value.

According to De Winter and Dodou (2019), the Cronbach alpha coefficient is a widely used method for assessing the reliability of questionnaires. The authors noted that the Cronbach alpha coefficient is easy to calculate and interpret, and provides a good estimate of the internal consistency of the questionnaire items.

3.7 Pilot Study

To test the reliability of the questionnaires, a pilot study was conducted among a small sample of respondents from the SACCOs in Kakamega County on basis of it having similar SACCO characteristics to Bungoma. According to Koo and Li (2016), a pilot

sample should be at least 10% of the total sample size for the study. The study used a pilot of 24 SACCO employees. The pilot study identified any ambiguities, biases, or inconsistencies in the questionnaires. The feedback obtained from the pilot study was used to refine the questionnaires to ensure that they are valid and reliable.

According to Ayub and Odero (2021), conducting a pilot study helps to test the reliability of the questionnaires before the actual study. The authors noted that the pilot study helps to identify any problems with the questions and to refine the questionnaires to ensure that they are valid and reliable. Similarly, Wang and Wang (2019) suggest that pilot studies are essential for testing the validity of questionnaires as they help to identify any issues that may affect the quality of the data collected.

3.8 Data Collection Procedure

After the defense of the proposal, the researcher sought approval from the university, Masinde Muliro University of Science and Technology (MMUST), by requesting a letter of introduction to the SACCOS in Bungoma County. This letter was presented to the relevant SACCOS for approval and permission to conduct the study. Additionally, the researcher sought clearance from the National Commission for Science, Technology, and Innovation (NACOSTI) by submitting a research proposal to the institution. Once the necessary approvals were made, the researcher proceeded to schedule appointments with the SACCOS' CEOs, CFOs, accounting staff, and administrative staff. During these appointments, the researcher administered the questionnaires and requested the respondents to fill them out. The questionnaires were dropped off and picked up the following day to allow the respondents ample time to answer the questions.

3.9 Data Analysis Procedure

The data analysis procedure involved several steps. Firstly, the collected data was cleaned and coded to ensure that it is ready for analysis. This step involved checking for completeness and accuracy of data collected. Next, descriptive statistics was computed to summarize the data collected from the questionnaires and entered SPSS version 23. This provided a clear understanding of the investment decisions made by the SACCOs and their impact on financial performance.

Regression analysis was used to test the hypothesis and examine the relationship between investment decisions and financial performance. This helped to establish whether investment decisions have a significant impact on the financial performance of SACCOs in Bungoma County. To derive a regression equation for the study, the specific objectives were used as independent variables while the financial performance of SACCOs in Bungoma County was used as the dependent variable. The equation was represented as:

Simple linear regression model:

- i. Financial Performance = $\beta_0 + \beta_1(\text{Expansion Decision}) + \epsilon$
- ii. Financial Performance = $\beta_0 + \beta_2(\text{Replacement Decision}) + \epsilon$
- iii. Financial Performance = $\beta_0 + \beta_3(\text{R\&D Decision}) + \epsilon$

Multiple regression model:

$$\text{Financial Performance} = \beta_0 + \beta_1(\text{Expansion Decision}) + \beta_2(\text{Replacement Decision}) + \beta_3(\text{R\&D Decision}) + \epsilon$$

Where:

β_0 = Intercept

β_1 - β_3 = Coefficients of independent variables

ε = Error term

The coefficients (β_1 - β_3) indicated the extent to which each specific investment decision (Expansion, Replacement and R&D) affects the financial performance of SACCOs in Bungoma County. The intercept (β_0) represent the average financial performance of SACCOs in Bungoma County when all investment decisions are held constant. Regression analysis is a statistical tool used to determine the relationship between a dependent variable and one or more independent variables. However, for regression analysis to produce reliable results, certain assumptions must be met. The four main assumptions of regression analysis are linearity, independence, normality, and homoscedasticity (Hair, *et al.*, 2019).

Correlation analysis was used to examine the relationship between investment decisions and financial performance variables. Regression analysis was used to determine the extent to which investment decisions predict financial performance variables, controlling for other relevant factors such as market conditions and macroeconomic variables. The analysis was conducted using statistical software thus SPSS and the results were presented in tables and graphs for easy interpretation.

The first assumption of regression analysis is linearity, which assumes that there is a linear relationship between the dependent variable and the independent variables. This assumption can be tested by examining a scatter plot of the dependent variable against the independent variables. If the scatter plot shows a non-linear relationship, such as a curve,

then the linearity assumption is not met. The second assumption is independence, which assumes that the observations are independent of each other. This means that the value of one observation does not effect the value of another observation. To test this assumption, a Durbin-Watson test was performed. If the test statistic is between 1.5 and 2.5, then the independence assumption is met (Kutner, *et al.*, 2005).

The third assumption is normality, which assumes that the errors of the regression model are normally distributed. This assumption can be tested by examining a histogram of the residuals. If the histogram shows a bell-shaped curve, then the normality assumption is met. Alternatively, a Shapiro-Wilk test can be performed to test for normality. The fourth assumption is homoscedasticity, which assumes that the variance of the errors is constant across all levels of the independent variables. This assumption can be tested by examining a scatter plot of the residuals against the predicted values. If the scatter plot shows a random pattern with no discernible pattern or trend, then the homoscedasticity assumption is met (Kutner, *et al.*, 2005).

If any of these assumptions are not met, the results of the regression analysis may not be reliable. For example, if the linearity assumption is not met, then the model may not accurately predict the value of the dependent variable. Similarly, if the normality assumption is not met, then the confidence intervals and p-values for the coefficients may not be accurate. In such cases, it may be necessary to transform the data or use a different statistical model (Myers & Montgomery, 2002).

Regression analysis is a powerful statistical tool for examining the relationship between a dependent variable and one or more independent variables. However, it is important to

ensure that the assumptions of regression analysis are met in order to obtain reliable results. Failure to meet these assumptions may lead to inaccurate or unreliable results, which may have serious implications for decision-making. Therefore, it is essential to carefully examine and test the assumptions of regression analysis before drawing any conclusions (Myers & Montgomery, 2002).

Finally, the researcher interpreted the results obtained from the data analysis and drew conclusions based on the findings. The conclusions were used to make recommendations on how SACCOs can make effective investment decisions to improve their financial performance.

3.10 Ethical Considerations

When conducting research on the effects of investment decisions on the financial performance of SACCOs in Bungoma County, it is important to consider several ethical issues. These include: Informed consent: Participants were fully informed of the research purpose, procedures, risks, and benefits before agreeing to participate. The researcher obtained written consent from each participant. The confidentiality of participant information was protected. The researcher ensured that all data collected from participants was kept confidential and is only accessible to authorized personnel. Also privacy was observed. Participants had right to privacy which the researcher respected by ensuring that their personal information is not disclosed or used for any purpose other than the research.

The other is voluntary participation: Participants did not coerce or force respondents to participate in the study. There was freedom to choose whether or not to participate, and the researcher respected their decision. Also, fairness: The researcher ensured that the study

was conducted in a fair and unbiased manner. Participants were selected based on objective criteria, and the research did not discriminate against any participant based on their gender, age, race, religion, or any other personal characteristic. Finally, conflict of interest: The researcher disclosed any potential conflicts of interest that could affect the study's objectivity and credibility.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Overview

This chapter presented results on the effect of investment decisions on financial performance of SACCOs in Bungoma County. The chapter provides both descriptive and inferential statistics.

4.2 Response Rate

Table 4.1: Response Rate

Response	Frequency	Percent
Response	162	67.5
Non response	78	32.5
Total	240	100.0

Source: (Researcher, 2023)

The study sample was 240 of which 162 responded during the study representing 67.5% which was considered representative enough. Champion and Sear (2009) considers a response exceeding 69% as a very high response hence 91.4% response exceeds 69% hence a very high response to warrant results.

4.3 Reliability and Validity Tests

The construction of collection instrument adequacy and accuracy of responses provided in the instrument was determined in table 4.2 below.

Table 4.2: Reliability test

Variable	Cronbach alpha
Expansion Decision	.911
Replacement decision	.796
Research and development decision	.889
Overall	.875

Source: Researcher, (2023)

Cronbach's Alpha >0.7 indicates reliability of data, from data provided expansion decision provided $0.911 > 0.7$, replacement decision $0.796 > 0.7$ and research and development decision $0.889 > 0.7$. This confirmed reliability of data, the overall reliability was 0.875.

Table 4.3: KMO Test

Main component analysis was applied and the results for Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) are shown below.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.742
Factor loading	Component
Expansion Decision	.688
Replacement decision	.829
Research and development decision	.776
Financial Performance	.742

Source: Researcher, (2023)

Kaiser-Meyer-Olkin measures sampling adequacy that examines appropriateness for the use of factor analysis. A range of 0.5 to 1.0 in Kaiser-Meyer-Olkin indicates appropriateness of factor analysis. Kaiser-Meyer-Olkin value of 0.742 explains appropriateness for research. All factor loading were more than 0.4 hence all questions were retained.

4.4 Demographic Characteristics of the Respondents

The study established the general information on age, working experience, and designation.

4.4.1 Working experience

The duration served in SACCOs by respondents was indicated in the table below.

Table 4.4: Working experience

Experience	Frequency	Percent
Less than 1 year	10	6.2
1-2 years	14	8.6
3-5 years	138	85.2
Total	162	100.0

Source: Researcher, (2023)

In table 4.4, most respondents 138 (85.2%) had served 3-5 years, 14 (8.6%) had served for 1-2 years as 10(6.2%) had served for less than 1 year. No employee had served for the period above 6 years hence not included in the analysis. This showed that SACCO service being between 3-5 years implied well positioned to tell the effect of investment decisions on financial performance of SACCOs in Bungoma.

4.4.2 Age of Respondents

The age of respondents at Bungoma SACCOs was well represented as shown in table 4.5

Table 4.5: Age of Respondents

Age	Frequency	Percent
25-34 years	2	1.2
35-44 years	28	17.3
45-54 years	80	49.4
55 years and above	52	32.1
Total	162	100.0

Source: Researcher, (2023)

The study showed that 80(49.4%) were 45-54 years of age, fell within the age bracket of 46-55 years, 52(32.1%) of respondents were 55 years and above, 28(17.3%) of respondents were 35-44 years whereas a handful 2(1.2%) of respondents 25-34 years. This representation of respondents were better informed on the effect of SACCO decisions on financial performance of SACCOs.

4.4.3 Designation of Respondents

The designation of the respondents in SACCOs was shown in table 4.6.

Table 4.6: Designation of the Respondents

Designation	Frequency	Percent
CEO	10	6.2
CFO	16	9.9
Accounting staff	46	28.4
Senior Administrative staff	40	24.7
Others	50	30.9
Total	162	100.0

Source: Researcher, (2023)

Results above showed that at the top CEOs were 10(6.2%) and CFO were 16(9.9%) accountants were 46(28.4%), senior administrators at 40(24.7%) and other categories mostly subordinates at 50(30.9%). With accountants being well represented in the study

among SACCOs in Bungoma County implied easier understanding on the effect of SACCO decisions on financial performance of SACCOs.

4.5 Descriptive Analysis

The views of respondents were sought on expansion decision, replacement decision and research and development decisions. Frequencies and percentages were hence provided.

4.5.1 Expansion Decision on Financial Performance

The researcher sought to establish the effect of expansion decision on financial performance of SACCOs in Bungoma County. A five (5) Likert Scale was used where one (1) implied the least and five (5) the highest positive response (1=Strongly Disagree (SD), 2=Disagree (D), 3=Undecided (U), 4=Agree (A), 5 =Strongly Agree (SA) was used in the analysis of data. The results of the Likert Scale were shown in table 4.7.

Table 4.7: Likert Scale on Expansion Decision

Description	N	SD (%)	D (%)	U (%)	A (%)	SA (%)	Me an	St d
1. The SACCO's decision to open new branches in different parts of Bungoma County has positively impacted its financial performance.	16 2	2 (16.7)	0 (0)	33 (20.4)	61 (37.7)	41 (25.3)	3.72	1.02
2. The SACCO's decision to introduce new loan products has led to an increase in the number of members and borrowers.	16 2	1 (0.6)	21 (13)	53 (32.7)	51 (31.5)	36 (22.2)	3.62	0.99
3. The SACCO's decision to invest in technology, such as online banking and mobile banking, has improved its customer service and accessibility.	16 2	0 (0)	23 (14.2)	44 (27.2)	48 (29.6)	47 (29)	3.73	1.03
4. The SACCO's decision to partner with other financial institutions has increased its capacity to provide financial services to its members.	16 2	0 (0)	18 (11.1)	56 (34.6)	49 (30.2)	39 (24.1)	3.67	0.96
5. The SACCO's decision to expand its membership base by targeting specific demographics, such as youth or women, has resulted in increased membership and loan portfolios.	16 2	3 (1.9)	29 (17.9)	54 (33.3)	50 (30.9)	26 (16)	3.41	1.02
6. The SACCO's decision to acquire or merge with other SACCOs has improved its market position and competitiveness.	16 2	0 (0)	27 (16.7)	49 (30.2)	68 (42)	18 (11.1)	3.48	0.90
7. The SACCO's decision to diversify its investment portfolio, such as investing in real estate or stocks, has increased its returns on investment.	16 2	2 (1.2)	47 (29)	63 (38.9)	27 (16.7)	23 (14.2)	3.56	0.97
8. The SACCO's decision to provide training and capacity-building for its staff and members has led to improved financial performance and member satisfaction.	16 2	0 (0)	22 (13.6)	45 (27.8)	67 (41.4)	28 (17.3)	3.62	0.92
9. The SACCO's decision to engage in corporate social responsibility activities, such as community outreach or environmental initiatives, has enhanced its reputation and member loyalty.	16 2	0 (0)	31 (19.1)	35 (21.6)	83 (51.2)	13 (8)	3.48	0.89

Average	3.59	0.87
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Source: Researcher, (2023)

From table 4.7, the results showed that 61(37.7%) agreed as 41(25.3%) strongly agreed that SACCO decision to open new branches in different parts of Bungoma County has positively impacted its financial performance. Regarding whether SACCO's decision to introduce new loan products has led to an increase in the number of members and borrowers 51(31.5%) agreed as 36(22.2%) strongly agreed. Results showed that 48(29.6%) agreed as 47(29%) strongly agreed that the SACCO's decision to invest in technology, such as online banking and mobile banking had improved its customer service and accessibility, 50(30.9%) agreed that the SACCO's decision to partner with other financial institutions had increased its capacity to provide financial services to its members, 68(42%) agreed that SACCO's decision to acquire or merge with other SACCOs had improved its market position and competitiveness.

The study showed that 63(38.9%) of respondents agreed that SACCO's decision to diversify their investment portfolio, such as investing in real estate or stocks, had increased its returns on investment, 61(41.4%) agreed that SACCO's decision to provide training and capacity building for its staff and members had led to improved financial performance and member satisfaction. Lastly 83(51.2%) agreed that SACCO's decision to engage in corporate social responsibility activities, such as community outreach or environmental initiatives, had enhanced its reputation and member loyalty. Investment decision on expanding the business was fairly agreed on regarding financial performance. From the study the averages mean was 3.59 and standard deviation of 0.87.

4.5.2 Replacement Decisions on Financial performance

The researcher sought to establish the effect of replacement decision on financial performance of SACCOs in Bungoma County. A five (5) Likert Scale was used where one (1) implied the least and five (5) the highest positive response (1=Strongly Disagree (SD), 2=Disagree (D), 3=Undecided (U), 4=Agree (A), 5 =Strongly Agree (SA) was used in the analysis of data. The results of the Likert Scale were shown in table 4.8.

Table 4.8: Likert Scale on Replacement Decisions

Description	N	SD (%)	D (%)	U (%)	A (%)	SA (%)	Me an	St d
1. The replacement of outdated technology has improved the efficiency of SACCO operations.	16 2	0 (0)	28 (17.3)	55 (34)	54 (33.3)	25 (15.4)	2.94	0.70
2. The replacement of aging equipment has improved the quality of service provided by SACCOs.	16 2	0 (0)	14 (8.6)	68 (42)	63 (38.9)	17 (10.5)	3.67	0.84
3. The replacement of old furniture and fittings has enhanced the appearance of SACCO branches.	16 2	2 (1.2)	28 (17.3)	56 (34.6)	46 (28.4)	30 (18.5)	3.69	0.85
4. The replacement of underperforming staff has resulted in better customer service and increased productivity.	16 2	0 (0)	48 (29.6)	45 (27.8)	54 (33.3)	15 (9.3)	3.66	0.80
5. The replacement of high-risk investments with more stable options has improved the financial stability of SACCOs.	16 2	0 (0)	10 (6.2)	45 (27.8)	92 (56.8)	15 (9.3)	3.45	0.82
6. The replacement of traditional marketing methods with digital marketing has increased the outreach and visibility of SACCOs.	16 2	2 (1.2)	43 (26.5)	54 (33.3)	33 (20.4)	30 (18.5)	3.51	0.81
7. The replacement of manual bookkeeping with computerized systems has improved the accuracy of financial records and reporting.	16 2	2 (1.2)	8 (4.9)	30 (18.5)	75 (46.3)	47 (29)	3.87	0.88
8. The replacement of outdated policies and procedures with modern ones has streamlined SACCO	16 2	2 (1.2)	41 (25.3)	37 (22.8)	70 (43.2)	12 (7.4)	3.91	0.95

operations and reduced errors.									
9. The replacement of unreliable suppliers with more trustworthy ones has ensured a steady supply of goods and services for SACCOs.	16	0	35	50	56	21	3.91	0.9	
	2	(0)	(21.6)	(30.9)	(34.6)	(13)		2	
Average							3.58	0.8	
								4	

Source: Researcher, (2023)

The findings of the study in table 4.8 showed that 54 (33.3%) of respondents agreed that replacement of outdated technology has improved the efficiency of SACCO operations, 63(38.9%) agreed that replacement of aging equipment has improved the quality of service provided by SACCOs, 46(28.4%) agreed that replacement of old furniture and fittings has enhanced the appearance of SACCO branches as 54 (33.3%) agreed that replacement of underperforming staff has resulted in better customer service and increased productivity, equally 92(56.8%) agreed that replacement of high risk investments with more stable options has improved the financial stability of SACCOs.

The SACCO employees further agreed that 111(31%) replacement of traditional marketing methods with digital marketing has increased the outreach and visibility of SACCOs, 75(46.3%) agreed that replacement of manual bookkeeping with computerized systems has improved the accuracy of financial records and reporting, 70(43.2%) agreed that replacement of outdated policies and procedures with modern ones has streamlined SACCO operations and reduced errors as 56(34.6%) agreed that replacement of unreliable suppliers with more trustworthy ones has ensured a steady supply of goods and services for SACCOs. Investment decision on replacement was fairly agreed on regarding financial performance. From the study the averages mean was 3.58 and standard deviation of 0.84.

4.5.3 Research and Development Decisions on Financial performance

The researcher sought to establish the effect of research and development decisions on financial performance of SACCOs in Bungoma County. A five (5) Likert Scale was used where one (1) implied the least and five (5) the highest positive response (1=Strongly Disagree (SD), 2=Disagree (D), 3=Undecided (U), 4=Agree (A), 5 =Strongly Agree (SA) was used in the analysis of data. The results of the Likert Scale were shown in table 4.9.

Table 4.9: Likert Scale on Research and Development Decisions

Description	N	SD (%))	D (%)	U (%)	A (%)	SA (%)	Mean	Std
1. Investing in research and development has improved the SACCO's competitiveness in the market.	16 2	2 (1.2)	37 (22. 8)	27 (16. 7)	94 (58)	2 (1.2)	3.47	0.9 5
2. The SACCO's research and development initiatives have led to the development of innovative products and services.	16 2	0 (0)	17 (10. 5)	42 (25. 9)	81 (50)	22 (13. 6)	3.51	0.9 7
3. The SACCO's research and development efforts have improved the efficiency and effectiveness of its operations.	16 2	0 (0)	40 (24. 7)	0 (0)	24 (14. 8)	81 (50)	3.46	1.0 2
4. The SACCO's investment in research and development has resulted in increased customer satisfaction.	16 2	0 (0)	14 (8.6)	47 (29)	81 (50)	20 (12. 3)	3.22	0.9 8
5. The SACCO's research and development initiatives have contributed to its growth and expansion.	16 2	0 (0)	18 (11. 1)	68 (42)	60 (37)	16 (9.9)	3.69	0.7 3
6. The SACCO's research and development activities have enabled it to keep up with changing customer needs and preferences.	16 2	0 (0)	18 (11. 1)	57 (35. 2)	73 (45. 1)	14 (8.6)	3.39	0.9 7
7. The SACCO's research and development investments have resulted in cost savings and increased profitability.	16 2	0 (0)	14 (8.6)	32 (19. 8)	77 (47. 5)	39 (24. 1)	3.28	1.0 9
8. The SACCO's research and	16	0	14	39	57	52	3.97	0.8

development efforts have helped it to differentiate itself from competitors.	2	(0)	(8.6)	(24.1)	(35.1)	(32.1)	9	
9. The SACCO's investment in research and development has positively impacted its long-term sustainability.	16	0	18	23	75	46	3.79	0.9
	2	(0)	(11.1)	(14.2)	(46.3)	(28.4)	2	
Average							3.53	0.9
								5

Source: Researcher, (2023)

The study findings in table 4.9 showed that 94(58%) agreed that investing in research and development has improved the SACCO's competitiveness in the market, 81(50%) SACCO's research and development initiatives have led to the development of innovative products and services,81(50%) agreed that SACCO's research and development efforts have improved the efficiency and effectiveness of its operations, 81(50%) agreed that SACCO's investment in research and development has resulted in increased customer satisfaction.

Furthermore 60(37%) agreed that SACCO's research and development initiatives have contributed to its growth and expansion, 73(45.1) agreed that SACCO's research and development activities have enabled it to keep up with changing customer needs and preferences, 77(47.5%) agreed that SACCO's research and development investments have resulted in cost savings and increased profitability as 57 (35.2%) agreed that SACCO's research and development efforts have helped it to differentiate itself from competitors. Lastly 75(46.3%) agreed that SACCO's investment in research and development has positively impacted its long-term sustainability. Investment decision on research and development was fairly agreed on regarding financial performance. From the study the averages mean was 3.53 and standard deviation of 0.95.

4.5.4 Financial Performance of SACCOs

The researcher sought to assess financial performance of SACCOs in Bungoma County. A 5 scale Likert (where 1=Strongly Disagree (SD), 2=Disagree (D), 3=Undecided (U), 4=Agree (A), 5 = Strongly Agree (SA)) was used in the analysis of data. The results of the Likert were shown in Table 4.10.

Table 4.10: Likert Scale on Financial performance

Description	N	SD (%)	D (%)	U (%)	A (%)	SA (%)	Mea n	Std
SACCO consistently achieves its financial goals and targets.	162	32 (19.8)	14 (8.6)	18 (11.1)	42 (25.9)	56 (34.6)	3.39	0.73
SACCO invests in technology and innovation to enhance operation efficiency.	162	28 (17.3)	12 (7.4)	38 (23.5)	46 (28.4)	38 (23.5)	3.51	0.97
SACCO manages risk and ensures security of member deposits.	162	28 (17.3)	8 (4.9)	42 (25.9)	48 (29.6)	36 (22.2)	3.87	0.89
SACCO interest rate on loans and savings are competitive.	162	0 (0)	4 (2.5)	54 (33.3)	84 (51.9)	20 (12.3)	3.91	0.97
SACCO provides efficient and promotes customer service.	162	0 (0)	4 (2.5)	54 (33.3)	82 (50.6)	22 (13.6)	3.46	1.02
Average							3.63	0.92

Source: Researcher, (2023)

Based on the study findings in table 4.10, 56 (34.6) strongly agreed that SACCO consistently achieves its financial goals and targets, 46 (28.4%) agreed that SACCO invests in technology and innovation to enhance operation efficiency, 48 (29.6%) agreed that SACCO manages risk and ensures security of member deposits, 84 (51.9%) agreed that SACCO interest rate on loans and savings are competitive as 82 (50.6%) agreed that SACCO provides efficient and promotes customer service. The results indicate that financial performance was facilitated by expansion decisions, replacement decisions and research and development.

The study is in agreement with Chen et al. (2020) who investigated found the relationship between investment decisions and financial performance in credit unions in the United States as positive and significant. It further concurs with by Mose et al. (2019) who conducted a study in Tanzania and found a positive and significant relationship between investment decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. Equally Fomum *et al.* (2019) in Cameroon found a positive and significant relationship between investment decisions and financial performance of SACCOs. Kiprop and Onyango (2020) found a positive correlation between investment decisions and financial performance of Kenyan SACCOs. From the study the averages mean was 3.63 and standard deviation of 0.92.

4.6 Diagnostic Tests

Before the inferential statistics were carried out, the researcher conducted diagnostic tests to determine whether the data collected met the assumption of the regression analysis.

4.6.1. Normality test

The normality test was assessed by both Shapiro-Wilk and Kolmogorov-Sminorv tests at 95% confidence interval. If the p-values in the Sig. column was below 0.05, the null hypothesis was rejected and therefore there was evidence that the data tested was not from a normally distributed population. The researcher sought to carry out normality test on the data of expansion decision, replacement decision, research and development decision and financial performance (Champion & Sear, 2009). The findings were shown in table 4.11.

Table 4.11: Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Expansion decision	.143	162	.000	.900	162	.000
Replacement decision	.091	162	.002	.949	162	.000
Research & development decision	.212	162	.000	.841	162	.000
Financial Performance	.163	162	.000	.902	162	.000

a. Lilliefors Significance Correction

Source: Researcher, (2023)

From table 4.12, results from Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) suggested that the residuals were not normally distributed (sig. <.05) meaning that tests of normality failed.

Ghasemi and Zahedias (2012) recommends for visual assessment of normality test for large samples. Based on Q-Q plot of expansion decision, normality was appropriate based on line of fit especially if the population is greater than 30 hence sensitive to outliers.

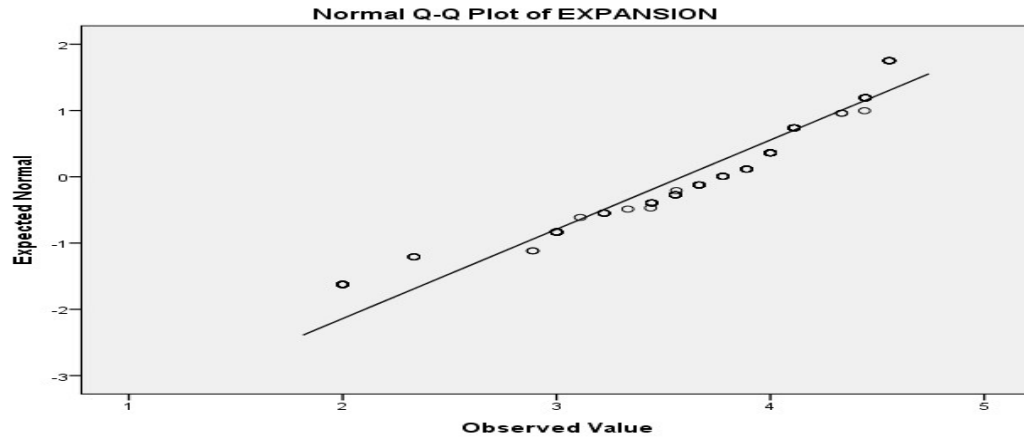


Figure 4.1 Normal Q-Q Plot of Expansion Decision

Furthermore the Q-Q Plot for replacement decision, the line of fit appropriateness was realized as the departure to normality was small assuming normality for data.

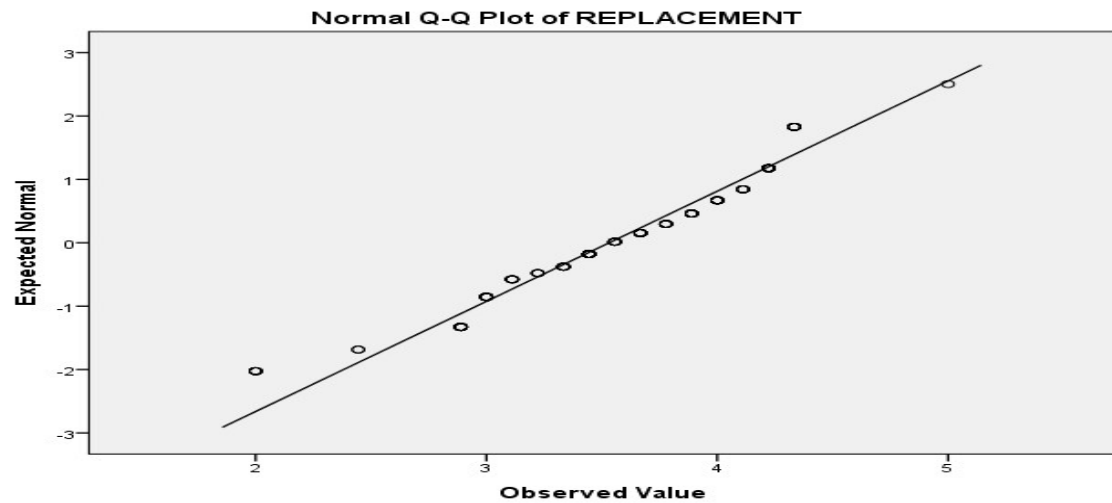


Figure 4.2 Normal Q-Q Plot of Replacement Decision

Regarding research and development the departure from normality was equally small from approximation of line of fit.

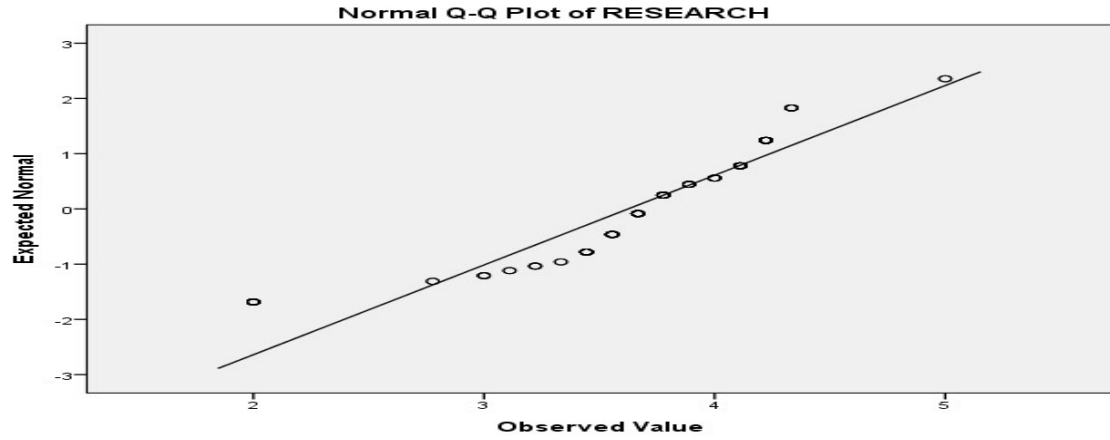


Figure 4.3 Normal Q-Q Plot of Research and Development Decision

The Q-Q Plot for financial performance, the line of fit appropriateness was realized as the departure to normality was small assuming normality for data.

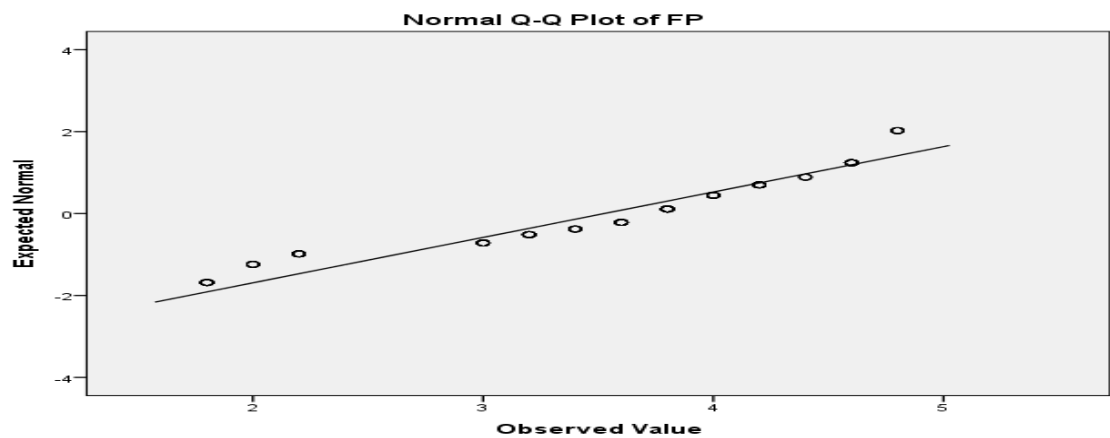


Figure 4.4 Normal Q-Q Plot of Financial Performance

4.6.3 Multicollinearity Test

Table 4.12: Tests for Multicollinearity

Model	Collinearity Statistics
-------	-------------------------

		Tolerance	VIF
1	(Constant)		
	Expansion decision	.368	2.720
	Replacement decision	.648	1.542
	Research and development	.370	2.706

a. Dependent variable: Financial performance

Source: Researcher, (2023)

The tolerance and Variance Inflation Factor (VIF) values were used to check multi-collinearity. The tolerance value <1 and VIF value <10 indicated non multi-collinearity. Regarding VIF value; expansion decision $10 < 2.720$, replacement decision $10 < 1.542$, research and development $10 < 2.706$. On the other hand the tolerance value expansion decision was $0.368 < 1$, replacement decision $0.648 < 1$ and research and development $0.370 < 1$. This implied non multi-collinearity (Ghasemi & Zahedias, 2012).

4.6.4 Correlation analysis

Table 4.13 Pearson Correlation

		Correlations			
		Expansion decision	Replacement decision	Research decision	Financial Performance
Expansion decision	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	162			
Replacement decision	Pearson Correlation	.561**	1		
	Sig. (2-tailed)	.000			
	N	162	162		
Research decision	Pearson Correlation	.781**	.558**	1	
	Sig. (2-tailed)	.000	.000		
	N	162	162	162	
Financial Performance	Pearson Correlation	.708**	.738**	.673**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	162	162	162	162

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

Source: (Researcher, 2023)

The results above indicate that at 0.05 level of significance, expansion decision was a significant predictor of financial performance ($r = 0.708$, $p\text{-value} = 0.000 < 0.05$). This means that an increase in expansion decision leads to an increase in financial performance. Equally there was a positive and significant relationship between replacement decision and financial performance with a Pearson correlation coefficient $r = 0.738$, $p\text{-value} = 0.000 < 0.05$ which was significant at 0.05 level of significance. This implies that increased replacement decision results in an increased financial performance. The results also confirmed that at 0.05 level of research and development was a significant predictor of financial performance ($r = 0.673$, $p\text{-value} = 0.000 < 0.05$). An increase in research and development leads to an increase in financial performance. The study agrees with Kiprop and Onyango (2020) who found a positive correlation between investment decisions and financial performance of Kenyan SACCOs.

4.7 Regression Analysis

The study sought to establish the effect of investments decisions on financial performance of SACCOs in Bungoma County. Simple linear Regression analysis for expansion decision, replacement decision and research and development were conducted. Later multiple regression and stepwise regression were conducted.

4.7.1 Expansion Decision and Financial Performance

The study sought to establish the effect of expansion decision on financial performance. This was done using simple linear regression test.

Table 4.14: Simple Linear Regression for Expansion Decision

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.708 ^a	.501	.498	.63937

a. Predictors: (Constant), Expansion decision

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	65.703	1	65.703	160.722	.000 ^b
	Residual	65.408	160	.409		
	Total	131.111	161			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Expansion decision

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	.439	.249		1.764	.080
	Expansion decision	.861	.068	.708	12.678	.000

a. Dependent Variable: Financial Performance

Source: Researcher, (2023)

The results in table 4.14 above provides R-square of 0.501 implying, variation of financial performance at 50.1% was explained by expansion decision. At 0.05 level of significance the ANOVA test showed that expansion decision was important in predicting financial performance of SACCOs in Bungoma County as indicated by the significance value=0.000 which was less than 0.05 level of significance ($p=0.000<0.05$). Therefore, expansion decision had a significant effect on financial performance of SACCOs in Bungoma County (beta=0.708, $p\text{-value}=0.000<0.05$). The null hypothesis was hence

rejected. Expansion decision increased financial performance of SACCOs by 0.861 hence the regression model equation:

$$Y=0.439+0.861 \text{ Expansion Decision.}$$

The findings agrees with those of Gakure et al. (2020) who found that there was a positive and significant relationship between expansion decisions and financial performance of SACCOs in Kenya. It further agrees with Odero and Wanjohi (2021) who found a positive relationship between expansion decisions and financial performance of SACCOs in Kenya. It disagrees Ojera and Were (2020) who found a negative insignificant relationship between expansion decisions and financial performance of SACCOs in Kenya. Further disagrees with Kihoro and Kariuki (2019) found a negative relationship between expansion decisions and financial performance, indicating that SACCOs that expanded tended to have lower levels of profitability.

4.7.2 Replacement Decision and Financial Performance

The study sought to establish the effect of replacement decision on financial performance of SACCOs in Bungoma County. This was done using simple linear regression test.

Table 4.15: Simple Linear Regression for Replacement Decision

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
.738 ^a	.544	.541	.61127		
a. Predictors: (Constant), Replacement Decision					
ANOVA ^a					
Model 1	Sum of Squares	Df	Mean Square	F	Sig.
Regression	71.328	1	71.328	190.898	.000 ^b

Residual	59.783	160	.374
Total	131.111	161	

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Replacement Decision

		Coefficients ^a			
		Unstandardized Coefficients		Standardized Coefficients	
Model		B	Std. Error	Beta	T
1	(Constant)	-.560	.300		-1.870
	Replacement Decision	1.157	.084	.738	13.817

a. Dependent Variable: Financial Performance

Source: Researcher, (2023)

Results in table 4.15 showed that R-square was 0.544 implying that variation of 54.4% of financial performance was explained by replacement decision. Replacement decision was important in predicting financial performance of SACCOs in Bungoma County as indicated by significance value=0.000 which was less than 0.05 level of significance ($p=0.000<0.05$). The study findings revealed that replacement decision had a significant effect on financial performance of SACCOs in Bungoma County ($\beta=0.738$, $p\text{-value}=0.000<0.05$). The null hypothesis was hence rejected. Therefore, for every unit increase in replacement decision there was a corresponding increase on financial performance of SACCOs by 1.157 hence the regression model equation: $Y=-0.560+1.157$ Replacement decision

The study agrees with Muturi and Ngugi (2016) who found a positive relationship between replacement decisions and financial performance of SACCOs in Kenya. Kang'ara et al. (2018) found a positive relationship between replacement decisions and financial performance of SACCOs in Kenya. It disagrees with Njenga and Njagi (2016) who found a negative relationship between replacement decisions and financial performance.

4.7.3 Research and Development and Financial Performance

The study sought to establish the effect of research and development on financial performance of SACCOs in Bungoma County. This was done using simple linear regression test.

Table 4.16: Simple Linear Regression for Research and Development

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.673 ^a	.453	.449	.66981	
a. Predictors: (Constant), Research and Development					
ANOVA ^a					
Model		Sum of Squares	Df	Mean Square	Sig.
1	Regression	59.328	1	59.328	.000 ^b
	Residual	71.783	160	.449	
	Total	131.111	161		
a. Dependent Variable: Financial Performance					
b. Predictors: (Constant), Research and Development					
Coefficients ^a					
Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	Sig.
1	(Constant)	-.049	.315		.878
	R& D	.986	.086	.673	.000
a. Dependent Variable: Financial Performance					

Source: Researcher, (2023)

Results in table 4.16 showed that R-square was 0.453 implying that, variation of 45.3% of financial performance was explained by research and development. Research and development was important in predicting financial performance of SACCOs in Bungoma County ($p=0.000 < 0.05$). Research and development significantly affected financial

performance of SACCOs in Bungoma County ($\beta=0.673, p\text{-value}=0.000<0.05$). The null hypothesis was rejected. Therefore, we conclude that research and development does affect financial performance. For every unit increase in research and development there was a corresponding increase on financial performance of SACCOs in Bungoma County by 0.986 hence the regression model equation: $Y=-0.049+0.986 \text{ Research and development}$.

The study agrees with Alemu et al. (2021) who found a positive relationship between research and development decisions and financial performance. The findings disagrees with Wu et al. (2018) found a negative relationship between R&D investment and profitability, indicating that firms with higher R&D investment tended to have lower levels of profitability.

4.7.4 Multiple Regression

The study sought to establish the combined effect of investment decisions on financial performance of SACCOs in Bungoma County. This was done using multiple linear regression tests.

Table 4.17: Multiple Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.825 ^a	.680	.674	.51521

a. Predictors: (Constant), Research & development, Replacement decision, Expansion decision

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	89.171	3	29.724	111.978	.000 ^b
Residual	41.940	158	.265		
Total	131.111	161			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Research & development, Replacement decision, Expansion decision

Coefficients^a					
Model		Unstandardized Coefficients	Standardized Coefficients		
	(Constant)	-1.322		-4.713	.000
	Expansion decision	.386	.318	4.279	.000
	Replacement decision	.734	.468	8.378	.000
	Research & development	.240	.164	2.209	.029

a. Dependent Variable: Financial Performance

Source: Researcher, (2023)

The study sought to establish the effect of investment decisions on financial performance of SACCOs in Bungoma County. Simple linear regression test was used for each variable leading to multiple regression analysis. The findings of the hypothesis test were presented, at 0.05 level of significance the ANOVA test indicated that in this model the independent variables; expansion decision, replacement decision and research & development were predictors of financial performance among SACCOs in Bungoma County($p=0.000<0.05$). Expansion decision was a significant predictor of financial

performance among SACCOs in Bungoma County ($p=0.000<0.05$). Replacement decision was a significant predictor of financial performance among SACCOs in Bungoma County ($p=0.000<0.05$).

Expansion decision was increased by one unit, financial performance would increase by 0.386, a unit increase in replacement decision would result to 0.734 increase in financial performance and a unit increase in research and development would result in 0.240 increase in financial performance among SACCOs in Bungoma County. This showed that to realize financial performance among SACCOs in Bungoma County; expansion decision, replacement decision and research and development were of significant value, hence the regression model equation:

$$Y = -1.322 + 0.386 \text{ expansion decision} + 0.734 \text{ replacement decision} + 0.240 \text{ Research \& development.}$$

The study is in agreement with Chen *et al.* (2020) who investigated found the relationship between replacement decisions and financial performance in credit unions in the United States as positive and significant. It further concurs with by Mose et al. (2019) who conducted a study in Tanzania and found a positive and significant relationship between replacement decisions and financial performance, indicating that SACCOs that made better investment decisions tended to have higher levels of profitability. Equally Fomum *et al.* (2019) in Cameroon found a positive and significant relationship between expansion decisions and financial performance of SACCOs. Kiprop and Onyango (2020) found a positive correlation between expansion decisions and financial performance of Kenyan SACCOs.

4.7.5 Stepwise Regression Analysis

Stepwise regression was conducted on investment decision and financial performance of SACCOs in Bungoma County as illustrated in the table below.

Table 4.18: Stepwise Regression Model Summary

Model	R	R Square	Adj R Square	Model Summary		Change Statistics			
				Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.708 ^a	.501	.498	.63937	.501	160.722	1	160	.000
2	.819 ^b	.670	.666	.52146	.169	81.540	1	159	.000
3	.825 ^c	.680	.674	.51521	.010	4.881	1	158	.029

a. Predictors: (Constant), Expansion decision

b. Predictors: (Constant), Expansion decision, Replacement decision

c. Predictors: (Constant), Expansion decision, Replacement decision, Research and development decision

Source: Researcher, (2023)

The results of R^2 shows increase with addition of each variable. F value indicates significance for every addition of respective independent variables (Expansion decision, Replacement decision and Research decision). The gradual increase of R^2 from 0.501 to 0.670 and finally 0.680 in every step indicates significance of investment decision. Therefore expansion decision explains 50.1% of variance in financial performance of SACCOs, Replacement decision explains 16.9% while research and development decision explains 1%. Expansion decision contributed the highest then replacement decision and lastly research and development decision.

Table 4.19: ANOVA

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	65.703	1	65.703	160.722	.000 ^b
	Residual	65.408	160	.409		
	Total	131.111	161			
2	Regression	87.876	2	43.938	161.583	.000 ^c
	Residual	43.235	159	.272		
	Total	131.111	161			
3	Regression	89.171	3	29.724	111.978	.000 ^d
	Residual	41.940	158	.265		
	Total	131.111	161			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Expansion decision

c. Predictors: (Constant), Expansion decision, Replacement decision

d. Predictors: (Constant), Expansion decision, Replacement decision, Research decision

Source: Researcher, (2023)

The F test gave a value of 160.722, $p=0.000<0.05$ which explains the goodness of fit of the model in explaining variation in financial performance by Expansion decision. However on adding replacement decision F test increased to 161.583, $p=0.000<0.05$. Later on addition of Research and development decision F test dropped to 111.978, $p=0.000<0.05$.

The consistency of $p=0.000<0.05$ implies that the variables were significant.

Table 4.20: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	.439	.249		1.764	.080
	Expansion decision	.861	.068	.708	12.678	.000
2	(Constant)	-1.098	.265		-4.148	.000
	Expansion decision	.522	.067	.429	7.801	.000
	Replacement decision	.779	.086	.497	9.030	.000
3	(Constant)	-1.322	.280		-4.713	.000
	Expansion decision	.386	.090	.318	4.279	.000
	Replacement decision	.734	.088	.468	8.378	.000
	R & D decision	.240	.109	.164	2.209	.029

a. Dependent Variable: Financial Performance

Source: Researcher, (2023)

An increase of investment decision by one unit increased financial performance significantly thus at final model expansion decision at 0.386, replacement decision 0.734 and research and development 0.240. The p values indicated significance. Expansion decision $p=0.000<0.05$, replacement decision and research $p=0.000<0.05$ and development decision $p=0.029<0.05$. This showed that to realize financial performance among SACCOs in Bungoma County; expansion decision, replacement decision and research and development were of significant value, hence the regression model equation:

$$Y = -1.322 + 0.386 \text{ expansion decision} + 0.734 \text{ replacement decision} + 0.240 \text{ Research \& development.}$$

Table 4.21: Hypothesis Results

Hypothesis	Findings	Decision and basis
HO₁: The expansion decision does not have a significant effect on the financial performance of SACCOs in Bungoma County, Kenya.	Expansion decision has a significant positive effect on the financial performance of SACCOs in Bungoma County, Kenya.	Reject $0.00<0.05$
HO₂: The replacement decision does not have a significant effect on the financial performance of SACCOs in Bungoma County, Kenya.	Replacement decision has a significant positive effect on the financial performance of SACCOs in Bungoma County, Kenya.	Reject $0.00<0.05$
HO₃: The research and development decision does not have a significant effect on the financial performance of SACCOs in Bungoma County, Kenya.	Research and development has a significant positive effect on the financial performance of SACCOs in Bungoma County, Kenya.	Reject $0.00<0.05$

Source: Field Data (2024)

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The general objective of this study was to establish the effect of investment decisions on financial performance of SACCOs in Bungoma County. This chapter presents the summary findings, conclusions and recommendations. The chapter also presents suggestions for further study.

5.2 Summary of Findings

The summary was provided based on investment decisions thus expansion, replacement and research and development decisions on financial performance.

5.2.1 Expansion Decisions and Financial Performance

The findings showed that 61(37.7%) agreed as 41(25.3%) strongly agreed that SACCO decision to open new branches in different parts of Bungoma County has positively impacted its financial performance. Investment decision on expanding the business was fairly agreed at 83(51.2%) regarding financial performance. Expansion decision was a significant predictor of financial performance ($r = 0.708$, $p\text{-value} = 0.000 < 0.05$). R-square of 0.501 implied that variation of financial performance at 50.1% was explained by expansion decision.

5.2.2 Replacement Decisions and Financial Performance

The study found that 54 (33.3%) of respondents agreed that replacement of outdated technology has improved the efficiency of SACCO operations. Investment decision on replacement was fairly agreed at 92(56.8%) regarding financial performance. Replacement decision was a significant predictor of financial performance ($r = 0.738$, $p\text{-value} = 0.000 < 0.05$). R-square of 0.544 implied that variation of 54.4% of financial performance was explained by replacement decision.

5.2.3 Research and Development and Financial Performance

The study found that 94(58%) agreed that investing in research and development has improved the SACCO's competitiveness in the market. Investment decision on research and development was fairly agreed at 94(58%) regarding financial performance. The results also confirmed that at 0.05 level of research and development was a significant predictor of financial performance ($r = 0.673$, $p\text{-value} = 0.000 < 0.05$). R-square was 0.453 implied that variation of 45.3% of financial performance was explained by research and development.

5.3 Conclusions

From the linear and multiple regression results, the study concluded that expansion decision had significant effect on financial performance of SACCOs in Bungoma County. An increase in expansion decision in relation to investment would result to significant increase in financial performance. From the linear and multiple regression results, the

study concluded that expansion decision had significant effect on financial performance of SACCOs in Bungoma County.

From the linear and multiple regression results, the study concluded that replacement decision had significant effect on financial performance of SACCOs in Bungoma County. An increase in replacement decision in relation to investment would result to significant increase in financial performance. From the linear and multiple regression results, the study concluded that replacement decision had significant effect on financial performance of SACCOs in Bungoma County.

From the linear and multiple regression results, the study concluded that research and development decision had significant effect on financial performance of SACCOs in Bungoma County. An increase in research and development decision in relation to investment would result to significant increase in financial performance. From the linear and multiple regression results, the study concluded that research and development decision had significant effect on financial performance of SACCOs in Bungoma County.

5.4 Recommendations

The following recommendations have been made based on the study conclusions:

On expansion decisions SACCOs should open more branches, invest in technology, such as mobile banking and partner with other financial institutions so as to maintain the significance level on financial performance.

Replacement decisions should avoid outdated technology, design amicable policies and procedures and replace unreliable suppliers with more trustworthy ones so as to maintain the significance level on financial performance.

Research and development decisions such as introduction of new products and services should be put in place to help increase market share that would stimulate financial performance.

5.5 Suggestions for Further Study

Based on the scope of this study and limitations, the following suggestions are made for further research: A study between investment decisions and financial performance on SACCOs in other counties, equally on other financial institutions. Secondly similar study introducing moderator such as firm size and age of the firm. Thirdly a study involving other investment decision such as risk decisions. A study can be conducted on other decisions thus financing decisions and financial performance or dividend decisions and financial performance.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

Wilkister Barasa

P.o Box 365,

Bungoma

Tel no. 0710893244

Email: wilkisterbarasa23@gmail.com

Dear Participant,

I am a Master's student at MMUST, and as a partial requirement of my coursework assessment, I am required to submit a research report on “EFFECTS OF INVESTMENT DECISIONS ON THE FINANCIAL PERFORMANCE OF SACCOS IN BUNGOMA COUNTY, KENYA.”

I would highly appreciate it if you could kindly complete the questionnaire to assist me in collecting data. Your information, alongside others, will help me in my research and will be used strictly for academic purposes and treated as confidential. Therefore, please do not write your name on the questionnaire.

Thank you in advance for your participation.

Sincerely,

WILKISTER LUKELA

APPENDIX II: QUESTIONNAIRE

Instruction: Tick where appropriate ✓

- i. Please read each question carefully and provide your responses honestly and to the best of your knowledge.
- ii. There is no right or wrong answers. Your opinions and experiences are valuable to the study.
- iii. The questionnaire is anonymous, and your responses will be treated as confidential.
- iv. Do not provide any personal identifying information such as your name or contact details.
- v. Please choose the response option that best reflects your opinion or experience.
- vi. If you have any questions or concerns, please feel free to contact the researcher using the contact information provided in the letter of introduction.
- vii. For the Likert scale questions, select the number that best represents your level of agreement or disagreement with the statement.

Section A: Demographic Information

1. What is your age?

18-24	[]	45-54	[]
25-34	[]	55 and above	[]
35-44	[]		

2. What is your job title?

CEO	[]	CFO	[]
-----	-----	-----	-----

Accounting staff []

Senior administrative staff []

Other (please specify) _____

3. How long have you worked at your current SACCO?

Less than 1 year []

6-10 years []

1-2 years []

More than 10 years []

3-5 years []

4. Which SACCO and branch of the SACCO do you work in?

Section B: Specific Information

Expansion Decisions

5. Kindly rate the following statements on the extent to which you agree with them on expansion decisions for as investment decisions for SACCOs in Bungoma Count, Kenya.

Key: 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree

Statements	5	4	3	2	1
1. The SACCO's decision to open new branches in different parts of Bungoma County has positively impacted its financial performance.					
2. The SACCO's decision to introduce new loan products has led to an increase in the number of members and borrowers.					
3. The SACCO's decision to invest in technology, such as online banking and mobile banking, has improved its customer service and accessibility.					
4. The SACCO's decision to partner with other financial institutions					

has increased its capacity to provide financial services to its members.					
5. The SACCO's decision to expand its membership base by targeting specific demographics, such as youth or women, has resulted in increased membership and loan portfolios.					
6. The SACCO's decision to acquire or merge with other SACCOs has improved its market position and competitiveness.					
7. The SACCO's decision to diversify its investment portfolio, such as investing in real estate or stocks, has increased its returns on investment.					
8. The SACCO's decision to provide training and capacity-building for its staff and members has led to improved financial performance and member satisfaction.					
9. The SACCO's decision to engage in corporate social responsibility activities, such as community outreach or environmental initiatives, has enhanced its reputation and member loyalty.					

Replacement decisions

6. Kindly rate the following statements on the extent to which you agree with them on replacement decisions for as investment decisions for SACCOs in Bungoma Count, Kenya

Key: 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree

Statements	5	4	3	2	1
1. The replacement of outdated technology has improved the efficiency of SACCO operations.					
2. The replacement of aging equipment has improved the quality of service provided by SACCOs.					
3. The replacement of old furniture and fittings has enhanced the appearance of SACCO branches.					
4. The replacement of underperforming staff has resulted in better customer service and increased					

productivity.					
5. The replacement of high-risk investments with more stable options has improved the financial stability of SACCOs.					
6. The replacement of traditional marketing methods with digital marketing has increased the outreach and visibility of SACCOs.					
7. The replacement of manual bookkeeping with computerized systems has improved the accuracy of financial records and reporting.					
8. The replacement of outdated policies and procedures with modern ones has streamlined SACCO operations and reduced errors.					
9. The replacement of unreliable suppliers with more trustworthy ones has ensured a steady supply of goods and services for SACCOs.					

Research and Development Decisions

7. Kindly rate the following statements on the extent to which you agree with them on research and development decisions for as investment decisions for SACCOs in Bungoma County, Kenya

Key: 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree

	5	4	3	2	1
1. Investing in research and development has improved the SACCO's competitiveness in the market.					
2. The SACCO's research and development initiatives have led to the development of innovative products and services.					

3. The SACCO's research and development efforts have improved the efficiency and effectiveness of its operations.					
4. The SACCO's investment in research and development has resulted in increased customer satisfaction.					
5. The SACCO's research and development initiatives have contributed to its growth and expansion.					
6. The SACCO's research and development activities have enabled it to keep up with changing customer needs and preferences.					
7. The SACCO's research and development investments have resulted in cost savings and increased profitability.					
8. The SACCO's research and development efforts have helped it to differentiate itself from competitors.					
9. The SACCO's investment in research and development has positively impacted its long-term sustainability.					

Financial performance

8. Kindly rate the following statements on the extent to which you agree with them on Financial performance for SACCOs in Bungoma County, Kenya.

Key: 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree

	5	4	3	2	1
1) SACCO consistently achieves its financial goals and targets.					
2) SACCO invests in technology and innovation to enhance operation efficiency.					
3) SACCO manages risk and ensures security of member deposits.					
4) SACCO interest rate on loans and savings are competitive.					
5) SACCO provides efficient and promotes customer service.					

Appendix III: List of SACCOs in Bungoma County

SACCO PATRONAGE BUNGOMA OFFICE.

BUMULA SUB- COUNTY

- 1 Bumula Huduma
- 2 Bumula Dairy

KANDUYI SUB – COUNTY

- 3 Bungoma North Youth Sacco
- 4 Ng'arisha Sacco
- 5 Bucoco Sacco
- 6 Bunotest Sacco
- 7 Kibabii University
- 8 Bungoma Youth Bunge
- 9 Bungoma Herbal
- 10 Bungoma County Matatu Employees
- 11 Bungoma Minto
- 12 Bumuco Sacco
- 13 Macco Sacco
- 14 Kanduyi BodaBoda Sacco
- 15 Arise & Shine Sacco
- 16 Remucos
- 17 Radio Sassa
- 18 Bungoma Century

SIRISIA SUB - COUNTY

- 19 Kibisi Rural Sacco
-

- 20 Chesikaki
- 21 Nandakhaola
- 22 LwandanyiHuduma
- 23 MasokuSirisiaHuduma
- 24 Lwakhakha
- 25 Mlimajasholako
- 26 Bungoma tobacco
- 27 Kikai rural

TONGAREN SUB - COUNTY

- 28 Naitiri Dairy Cooperative
- 29 Makunga blessed

WEBUYE EAST SUB - COUNTY

- 30 Nzoia Sacco
- 31 Panpaper Sacco
- 32 Heavy Chemicals Sacco
- 33 Nzoia Investment
- 34 New Maridadi
- 35 Pcea webuye
- 36 S.D.A Sacco
- 37 Sanga'alo

WEBUYE WEST SUB - COUNTY

- 38 Lugulu Urafiki Sacco

KABUCHAI SUB - COUNTY

39 Chebutere Sacco

40 Chwele Vision

41 SicheiBodaBoda

42 Esumangesi

ELGON SUB - COUNTY

43 Stawisha

44 Chepsicheka Huduma

45 Kapkap Huduma

KIMILILI SUB - COUNTY

46 Khamulati Rural

47 Zakstar Sacco

48 N-Trust

49 I.C.F.E.M

50 Namwela Huduma

51 3km

52 Bokoli Giant

53 Luchendi

APPENDIX IV: NACOSTI

 REPUBLIC OF KENYA Ref No: 434289	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION Date of Issue: 16/August/2023
RESEARCH LICENSE	
	
This is to Certify that Miss. WILKISTER LUKELA BARASA of Masinde Muliro University of Science and Technology, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Bungoma on the topic: EFFECTS OF INVESTMENT DECISIONS ON THE FINANCIAL PERFORMANCE OF SACCOS IN BUNGOMA COUNTY, KENYA for the period ending: 16/August/2024.	
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