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FINANCIAL INNOVATION AND FINANCIAL PERFORMANCE OF DEPOSIT-TAKING SACCOS IN NORTH RIFT REGION, KENYA

PETER GATIMU

MBADIST221121

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A RESEARCH DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS AND LEADERSHIP STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION OF ST. PAUL'S UNIVERSITY

NOVEMBER, 2024

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DECLARATION

This project is my own work and is not the result of anything done in collaboration. It has not been previously presented to any other institution. I agree that this project may be available for reference and photocopying, at the discretion of the University.

Signature: ……. …… Date: ……..

PETER GATIMU
MBADIST221121

Word Count:22,263

We confirm that the work contained in this dissertation was carried out by the student under our supervision.

Signature:…… Date: ……..

DR. STEPHEN NDUNG'U
First Supervisor

Signature …….. Date: ……..……

MR. PETER ONTERE NYAMIRA
Second Supervisor

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DEDICATION

This study is dedication to my parents Mr & Mrs. Gatimu, my siblings Victor & peter, my spouse Catherine, my child Leticiah Njau and the rest of my extended family for their encouragement and funding. I appreciate your devotion.

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ABSTRACT

Deposit-taking SACCOs in the North Rift Region of Kenya face significant financial performance issues that impede their ability to effectively serve their communities and sustain long-term growth. These challenges include fluctuating profitability, inefficient asset management, and high operational costs, which contribute to inconsistent financial performance across different. Therefore the study sought to assess the effect of financial innovation on financial performance of deposit-taking Saccos in North Rift Region, Kenya. Specifically, the study sought to assess the effect of product innovation, process innovation and organizational innovation on the financial performance of DT-SACCOS in the North Rift region. The study was anchored on the Schumpeter's theory of innovation, transaction cost innovation theory, innovation diffusion theory and dynamic capabilities theory. The study employed a causal research. The unit of analysis was 30 deposits taking SACCOs licensed by SASRA, (2023) in the North Rift Region. The unit of observation was 408 employees working with the with these SACCOs. The study used Slovin formula to obtain a sample size of 202 respondents. Secondary and primary sources of data were used to meet the objectives. The study assessed content validity, face validity and construct validity. Reliability was tested using Cronbach's alpha; values of 0.7 or more were acceptable. Research questionnaires were used to obtain primary information from a sample of employees. Secondary data was collected through data google sheet to collect data on net income and average total assets for all the Saccos. Descriptive statistics was employed in this study to determine general trends of the related variables. The study used multiple linear regression to determine the extent to which independent variable predicted the dependent variable. The findings revealed that product innovation had a strong positive correlation with ROA, In addition, the findings revealed that process innovation showed an even stronger positive correlation with ROA. Finally, the findings revealed that organizational innovation was positively correlated with ROA. Based on the findings the study concluded that product innovation had a significant effect on the on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The study also concluded that process innovation had a significant effect on financial performance. The study further concluded that organizational innovation had a significant effect on financial performance. The study recommended that the Deposit-Taking SACCOs (DT-SACCOS) should embrace a culture of innovation by encouraging creativity, experimentation, and continuous improvement within the organization. Regulators and policy makers should develop supportive regulatory frameworks and policies that encourage innovation, competition, and entrepreneurship within the SACCO sector.

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ABBREVIATIONS AND ACRONYMS

BOU	Bank of Uganda
CFA	Confirmatory Factor Analysis
DT-SACCOS	Deposit Taking SACCOS
EFA	Exploratory Factor Analysis
EFT	Electronic Funds Transfer
GDP	Gross Domestic Product
NACOSTI	National Commission for Science, Technology and Innovation
NCUA	National Credit Union Administration
NPLs	Non-Performing Loans
RBI	Reserve Bank of India
ROA	Return on Assets
ROE	Return on Equity
RTGS	Real Time Gross Settlement
SACCOs	Savings and Credit Cooperative Organizations
SASRA	SACCO Societies and Regulatory Authority
US	United States
VIF	Variance Inflation Factor

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OPERATIONAL DEFINITION OF TERMS

Deposit-Taking SACCOs	Refers to Savings and Credit Cooperative Societies that are licensed to take deposits and provide financial services to their members
Financial Innovation	Refers to the development and implementation of new financial products, services, processes, or technologies aimed at improving the efficiency, accessibility, and effectiveness of financial services provided by the SACCO to its members. In this study this included product innovation, process innovation and organizational innovation.
Financial Performance	Financial performance in the context of deposit-taking Saccos refers to the assessment of the Sacco's overall economic health and success. This includes evaluating key financial indicators such as profitability, liquidity, solvency and efficiency.
Organizational Innovation	Refers to the development and implementation of new organizational structures, policies, practices, or strategies aimed at enhancing the efficiency, effectiveness, and sustainability of the SACCO as a financial institution and cooperative enterprise. In this study this will include, agency banking, management systems, external relations and organizational restructuring.
Process Innovation	Refers to the introduction of new and improved methods, procedures, or technologies to optimize internal operations and enhance service delivery. In this study this included internet banking, office automation and loan tracking.
Product Innovation	Product innovation involves the development and introduction of new financial products and services within deposit-taking Saccos to meet the changing demands of their members. This includes the creation of tailored savings accounts, diversified loan products, or insurance offerings that cater to the specific financial needs and preferences of the Sacco's membership base.

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Deposit-taking Savings and Credit Cooperatives (SACCOs) play a significant role in providing financial services to communities worldwide. Their performance varies across different countries due to factors such as regulatory environments, economic conditions, and cultural norms, (Kumar & Shah, 2020). For instance, in United States, credit unions serve a similar function to SACCOs, providing financial services to members. According to data from the National Credit Union Administration (NCUA),(2020), there were over 5,000 federally insured credit unions in the U.S. (NCUA, 2021). They collectively held over $1.6 trillion in assets and served more than 125 million members. Their financial performance is monitored by regulatory agencies such as the NCUA, which assesses metrics such as net worth ratios, loan delinquency rates, and return on assets (ROA) to ensure financial stability Despite facing challenges such as competition from banks and regulatory burdens, U.S. credit unions have maintained relatively strong financial performance, with ROA averaging around 0.70% in recent years

In India, SACCOs are known as cooperative banks, and they play a crucial role in providing financial services to rural and urban communities. The Reserve Bank of India (RBI) regulates themwhere they are categorized into urban and rural banks based on their geographic location. By March 2021, India had over 1,500 urban cooperative banks and over 93,000 rural cooperative banks (RBI, 2021). Despite challenges such as governance regulation and non-performing assets (NPAs), the financial performance of these banks has improved over years, (Chaudhuri & Roy, 2021). Data from the RBI shows that the gross non-performing asset ratio for urban cooperative banks declined from 7.42% to 5.89% between in March 2017 to March 2021. Additionally, the net worth of urban cooperative banks increased by 12.5% during the same period (RBI, 2021).

In Nigeria, SACCOs are known as cooperative societies and are regulated by the Cooperative Societies Regulations Department of the Federal Ministry of Agriculture and Rural Development. By2020, Nigeria had over 25,000 registered cooperative societies, serving millions of members across various sectors of the economy (Nigeria Cooperative Societies Regulations Department, 2020). The financial performance of these societies is influenced by factors such as governance structures, regulatory compliance, and access to funding, (Obi

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& Eze, 2021). Despite challenges such as limited access to credit and governance issues, Nigerian cooperative societies have demonstrated resilience, with data showing that an average loan recovery rate of over 90% has been achieved over the years years (Nigeria Cooperative Societies Regulations Department, 2020).

In Uganda, SACCOs are known as savings and credit cooperatives and are regulated by the Bank of Uganda (BOU) and the Ministry of Trade, Industry, and Cooperatives. By 2021, Uganda had over 6,000 registered of them, serving millions of members across the country (BOU, 2021). These financial institutions are characterized by factors such as loan portfolio quality, capital adequacy, and operational efficiency, (Nabeta, & Kagina, 2020). Despite challenges such as governance issues and limited access to funding, Ugandan savings and credit cooperatives have demonstrated resilience, with data showing an average capital adequacy ratio of over 20% in years preceeding the study, (Barekye, & Mwesigye, 2021).

In Kenya, the SACCO sub-sector comprises DT-SACCOS and non-Deposit-Taking SACCOs. Under the SACCO Societies Act 2008, DT-SACCOS are licensed and regulated by SACCO Societies and Regulatory Authority (SASRA). These SACCOS essentially operate like commercial banks providing services that traditionally were only offered by the banks. With this development, their client base is expanded to include members who are not shareholders of SACCOs, (Mwangi & Nyakundi, 2022).

SACCOs have continually increased their role in financial inclusion and deepening in Kenya. For example ,in 2021, whereas banks and microfinance institutions recorded a decline in the number of branches, SACCOs brances increased. The regulated SACCOs' total assets contributed to 6.67% of the GDP in the period ending December 2021. The SACCO subsector's total assets by 2021 stood at 807.11 billion shillings, a 9.93% growth from the 2020 figures SASRA (2021).

1.1.1 Financial Innovation

Financial innovation encompasses the development and implementation of new financial products, services, processes, or technologies aimed at improving efficiency, accessibility, and risk management within the financial system (Adeel, et al., 2021). In the context of D-T SACCOs, financial innovation refers to the introduction of new products, services, or operational strategies designed to enhance the institution's ability to attract deposits, manage risk, and generate sustainable returns for its members, (Khan, et al., 2022). This can include

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the introduction of digital banking platforms, innovative loan products tailored to specific customer needs, or the adoption of advanced risk management techniques to mitigate credit and liquidity risks (Adeel et al., 2021). SACCOs, as member-owned financial institutions, have a unique opportunity to innovate and tailor their offerings to meet the diverse financial needs of their members, particularly in underserved or marginalized communities. Financial innovation enables SACCOs to expand their product and service offerings, catering to the evolving needs and preferences of their members. By introducing innovative savings products, investment options, and loan products with flexible terms and competitive interest rates, SACCOs can attract a broader customer base and deepen their relationships with existing members (Sodiq & Mubarik, 2020).

Edwards-Schachter (2018) lists ten types of innovation; technological, product, process, service, radical change of offereing disruptive ideas, business model, design-driven, social, and responsible innovation. Technological innovation involves the development and application of new technologies to improve products, services, or processes. It often results in significant advancements in efficiency, performance, or capabilities. For instance, the introduction of artificial intelligence and machine learning technologies has revolutionized various industries by enabling more accurate data analysis and automation (Edwards-Schachter, 2018). This type of innovation is crucial for maintaining competitive advantage and driving growth in technology-driven sectors. Product innovation refers to the creation or enhancement of goods or services to meet customer needs more effectively. It includes the introduction of new products or significant improvements to existing ones. An example is the development of smartphones with advanced features like facial recognition and augmented reality, which offer enhanced user experiences (Teece, 2021). Product innovation is vital for capturing market share and responding to consumer demands

Process innovation involves the implementation of new or significantly improved production or delivery methods. It aims to increase efficiency, reduce costs, and improve quality. For example, the adoption of lean manufacturing techniques has transformed production processes by minimizing waste and optimizing resource use. Process innovation is essential for enhancing operational performance and maintaining a competitive edge (Hammer & Champy, 2019). Service innovation focuses on developing new or improved services to enhance customer satisfaction and value. It includes changes in service delivery, customer interactions, or support systems. For instance, the rise of online banking services has

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revolutionized how financial institutions interact with customers and deliver services (Kotler & Keller, 2018). Service innovation is critical for addressing evolving consumer expectations and improving service quality (Fitzsimmons & Fitzsimmons, 2020).

Radical innovation represents breakthrough advancements that create entirely new markets or significantly alter existing ones. It often involves a high degree of risk and uncertainty. An example is the development of the internet, which transformed communication, commerce, and information access (Edwards-Schachter, 2018). Radical innovation is key for driving long-term growth and market disruption (Christensen, 2021). Disruptive innovation refers to innovations that disrupt existing markets by introducing simpler, more affordable solutions. These innovations often target underserved or less demanding segments before eventually moving upmarket. For example, Netflix disrupted the traditional video rental industry with its subscription-based streaming service (Edwards-Schachter, 2018). Disruptive innovation is important for challenging established players and creating new business opportunities (Christensen, 2021).

Business model innovation involves changes to the way a company creates, delivers, and captures value. It includes altering revenue models, value propositions, or distribution channels. An example is the shift from ownership to subscription models in industries like software and media. Business model innovation is crucial for adapting to market changes and enhancing profitability (Osterwalder & Pigneur, 2020). Design-driven innovation focuses on creating new products or services that are not only functional but also aesthetically pleasing and user-friendly. It emphasizes the role of design in shaping user experiences and driving consumer preferences. For example, Apple's emphasis on sleek, intuitive designs has contributed significantly to its market success (Edwards-Schachter, 2018). Design-driven innovation is essential for differentiating products and creating emotional connections with consumers (Brown, 2018).

Social innovation aims to address social challenges and improve community well-being through novel solutions. It often involves collaborative approaches and stakeholder engagement. An example is microfinance, which provides financial services to underserved populations to promote economic development (Edwards-Schachter, 2018). Social innovation is important for addressing societal issues and fostering inclusive growth (Murray et al., 2020). Responsible innovation involves the development of technologies and practices that consider ethical implications and societal impacts. It emphasizes sustainability, equity, and

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transparency. For instance, the adoption of green technologies that minimize environmental impact exemplifies responsible innovation (Edwards-Schachter, 2018). Responsible innovation is crucial for ensuring that technological advancements contribute positively to society (Stilgoe et al., 2021).

The study focused on product innovation, process innovation, and organizational innovation due to their direct impact on the financial performance of deposit-taking SACCOs. Product innovation is critical as it involves introducing new financial products or improving existing ones, directly affecting SACCOs' ability to attract and retain members (Kotler & Keller, 2018). Process innovation is essential for enhancing operational efficiency and reducing costs, which can significantly influence financial performance and member satisfaction (Hammer & Champy, 2019). Organizational innovation, which encompasses changes in management practices and organizational structures, is also relevant as it affects the overall strategic direction and effectiveness of SACCOs (Teece, 2021). These types of innovation are integral to improving financial performance and ensuring sustainable growth in a competitive financial environment.

1.1.2 Financial Performance

Financial performance refers to the assessment of how well an organization utilizes its financial resources to achieve its objectives and generate returns for its stakeholders. It encompasses various financial metrics such as profitability, liquidity, solvency, efficiency, and growth rates (Allen, 2021). In the context of D-T SACCOs, financial performance reflects the institution's ability to effectively manage its funds, attract deposits, extend loans, and generate sustainable returns for its members while maintaining financial stability, (Yunis, 2018). Key indicators of financial performance in SACCOs include ROA, ROE, asset quality ratios, liquidity ratios, and capital adequacy ratios (SASRA, 2021). These metrics provide insights into the SACCO's profitability, risk management practices, and overall financial health, enabling stakeholders to assess its performance and make informed decisions. Strong financial performance ensures the sustainability of SACCOs by enabling them to generate sufficient returns to cover operational expenses, maintain reserves, and fulfill member obligations (Mehran & Peristiani, 2021). SACCOs with favorable financial performance indicators such as high ROA and ROE are better positioned to attract deposits and investments, thereby enhancing their capacity to lend to members and support economic activities in their communities (SASRA, 2021).

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Financial performance is a measure of a firm's financial health. explains that it measures the extent to which an organization meets its short-term and long-term financial obligations. It measures how well a firm generates revenues from its assets and generates value for the owners of the firm. The sound financial performance of an organization gives it a competitive edge and makes it attractive to investors. The evaluation of financial performance of an institution is dependent on the interests of the stakeholder . For instance, managers, shareholders, and creditors have different perspectives in evaluating financial performance. Financial measures exist such as profit after tax, earnings per share, return on assets, return on equity and other financial ratios.

According to SASRA, (2019) SACCOs in North Rift region generally experienced a slow growth with most reporting a slight increase in assets, membership and profitability. The Return on Assets (ROA) and Return on Equity (ROE) averaged 2.5% and 3.2%, respectively. The sector's growth was driven by stable member contributions, prudent lending practices and steady economic conditions. In 2020 the onset of the COVID-19 pandemic significantly impacted financial performance. SACCOs saw a decline in loan repayments, increased non-performing loans (NPLs), and reduced member contributions due to economic disruptions. ROA dropped to 1.9%, while ROE fell to 2.5%. Liquidity issues also emerged as more members sought to withdraw savings, leading to operational strains (SASRA, 2020). In 2021 a gradual recovery was observed as the economy rebounded. SACCOs adapted by adopting digital financial innovations, leading to improved operational efficiency. ROA improved to 2.8%, while ROE rose to 3.3%. However, challenges such as high NPLs persisted, indicating a need for better financial management strategies (SASRA, 2021).

1.1.3 Deposit Taking SACCOs

Deposit-Taking Savings and Credit Cooperatives (SACCOs) in Kenya have a rich history dating back to the early 20th century. The concept of SACCOs originated from the cooperative movement, which aimed to empower communities through collective ownership and mutual assistance. SACCOs initially emerged as informal self-help groups, where members pooled their savings to provide loans and financial assistance to each other. Over time, these informal groups evolved into formalized SACCOs, registered under the Cooperative Societies Act (Cooperative Societies Act, 2004). The evolution of SACCOs in Kenya has been marked by several key milestones and developments. One significant event was the enactment of the Cooperative Societies Act in 2004, which provided a legal

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framework for the registration, regulation, and supervision of SACCOs in the country (Kibaara, et al., 2022). This legislation laid the foundation for the formalization and institutionalization of SACCOs, enabling them to operate more effectively and transparently.

Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in the North Rift region of Kenya play a crucial role in providing financial services to members, particularly those in rural and underserved areas (SASRA Act, 2008). These SACCOs offer savings and credit products, allowing members to deposit funds and access loans at favorable interest rates. The region is largely agricultural, and many SACCO members are farmers or small business owners who rely on these institutions for financial support. DT-SACCOs in the North Rift are crucial in promoting financial inclusion, offering financial solutions to both individuals and small enterprises, contributing to the region's economic development (Kibaara, et al., 2022).

However, DT-SACCOs in the North Rift region face significant challenges in implementing financial innovations. Product innovation, which includes the introduction of new financial products such as mobile banking, digital loans, or tailored savings products, is often limited by technological constraints and resource availability (Ouma, 2021). Many SACCOs lack the infrastructure needed to develop and deliver innovative products effectively, hindering their ability to remain competitive and meet the evolving needs of members. Inadequate member awareness and uptake of new products also present hurdles to maximizing the benefits of product innovation on financial performance.

In terms of process innovation, many SACCOs struggle with outdated operational systems, making it difficult to implement new and efficient processes such as automated loan approval systems or digital platforms for member transactions. These limitations affect operational efficiency, increasing costs and reducing profitability (Ouma, 2021). Additionally, organizational innovation, which involves changes in management practices, governance structures, or business models, remains slow. Many DT-SACCOs face resistance to organizational change due to entrenched traditional practices and a lack of capacity to innovate at the leadership level. This stagnation limits the ability of SACCOs to improve their overall performance and adaptability in a competitive financial environment.

1.2 Statement of the Problem

The financial performance of deposit-taking SACCOs in Kenya's North Rift region has demonstrated a complex trend over the last five years marked by both recovery and ongoing challenges. In 2021, SACCOs saw a moderate rebound with improvements in key financial

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metrics. The Return on Assets rose to 2.8%, and the return on equity increased to 3.3% as SACCOs adapted to the economic recovery and integrated digital financial innovations (SASRA, 2021). Despite these improvements, issues such as high non-performing loans persisted, reflecting underlying vulnerabilities in financial management and operational efficiency. In 2022, SACCOs continued their recovery trajectory, with ROA improving to 3.1% and ROE rising to 3.6%. The enhanced financial performance was attributed to further adoption of technology, improved risk management practices, and stabilization of member contributions. However, the sector still faced challenges related to liquidity, as rising operational costs and increased competition from alternative financial service providers put pressure on margins and profitability (SASRA, 2022).

By 2023, SACCOs in the North Rift region experienced a more pronounced recovery, with ROA reaching 3.4% and ROE at 4.0%. This positive trend was driven by more extensive implementation of digital tools and financial innovations, such as mobile banking and automated loan processing systems. Despite these advancements, the sector remained challenged by persistent issues such as inadequate capital reserves and regulatory compliance pressures. NPLs continued to be a concern, highlighting the need for ongoing improvements in loan management and member engagement strategies. The ongoing financial performance issues, despite gradual improvements, underscore the critical role of financial innovation in addressing sector-wide challenges. The integration of advanced financial technologies has shown promise in enhancing operational efficiency and member service. However, the sector must address deeper systemic issues, including effective financial management and regulatory compliance, to ensure sustainable growth and stability (SASRA, 2023).

Studies have been conducted on the financial innovation and financial performance of Saccos previously. Ngure, (2017) conducted a study on the financial innovations and performance of savings and credit co-operatives societies in Kirinyaga County, Kenya where the study used a descriptive research design. The findings revealed that financial innovations had a positive relationship with financial performance of SACCOs in Kirinyaga County. However, the study was conducted using a descriptive research design and focused on the general performance of savings and credit co-operatives societies in Kirinyaga County, Kenya. The current study focused on the financial performance of deposit taking SACCOs using a causal research design.

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Nekesa and Olewny (2018) imvestigated on the effect of financial innovation on financial performance: a case study of deposit-taking savings and credit cooperative societies in Kajiado County. The study used analytical research design. It was established that product, process and organizational innovations are the critical factors that influence the performance of the financial status of deposit-taking SACCOs in Kajiado County. However, the study was conducted in Kajiado County and used analytical research design the current study sought to fill the gap by using a descriptive research design entirely focusing on the deposit-taking Saccos in North Rift Region, Kenya. Ouma (2020) did a study on the financial innovations and performance of deposit taking Saccos in Nairobi City County, Kenya. The study used exploratory research design and the findings were , that new products and service processes had significant effect on the financial performance while new organizational form had insignificant effect on liquidity and profitability and significant effect on capital adequacy. However, the study was conducted in Nairobi City County and used exploratory research design the current study sought to fill the gap by using a causal research design with exclusive focus on the financial innovation and financial performance of deposit-taking Saccos in North Rift Region, Kenya.

1.3 Research Objective

The general objective of the study was to assess the relationship between financial innovation and financial performance of deposit-taking Saccos in North Rift Region, Kenya.

1.3.2 Specific Objectives

Specific objectives addressed in this study were to determine

i. The effect of product innovation and financial performance of DT-SACCOS in the North Rift region.
ii. The effect process innovation and financial performance of DT-SACCOS in the North Rift region.
iii. The effect organizational innovation and financial performance of DT-SACCOS in the North Rift region.

1.4 Research Hypotheses

The research tested the following research hypotheses:

H_{01}: There is no relationship between product innovation and financial performance of Deposit-Taking SACCOS

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H_{02}: There is no relationship between process innovation and financial performance of Deposit-Taking SACCOS

H_{03}: There is no relationship between organizational innovation and the financial performance of Deposit-Taking SACCOS

1.5 Significance of the Study

The findings of the study can help refine existing theories, such as the Schumpeter's theory of innovation, transaction cost innovation theory, regulation innovation theory and the modern portfolio theory. By providing empirical evidence and insights into how financial innovation influences the performance of SACCOs. Furthermore, the study may uncover new theoretical perspectives or dimensions that were previously overlooked, thus enriching the theoretical foundation of financial innovation research.

The results can also have practical applicationimplications for management practices within deposit-taking SACCOs. By understanding the impact of financial innovation on performance, managers can make informed decisions regarding the adoption and implementation of innovative financial products, processes, and organizational structures. Insights gained from the study can help SACCO managers identify areas for improvement, optimize resource allocation, and develop strategic initiatives to enhance overall performance. For example, if the study reveals that product innovation significantly improves financial performance, managers can prioritize investments in developing new products or services to meet the evolving needs of members and remain competitive in the market.

1.5.3 Policy Formulation

Policymakers can benefit from the findings of this study in formulating policies and regulations aimed at promoting financial innovation and fostering a conducive environment for SACCOs. Understanding the relationship between financial innovation and performance can inform policymakers about the potential benefits and challenges associated with innovation adoption within the SACCO sector. Policymakers can use this knowledge to design supportive frameworks that incentivize innovation, facilitate access to funding for innovation initiatives, and mitigate potential risks.

1.5.4 Researchers

For researchers in the field of finance, this study offers an opportunity to contribute to the academic literature and advance knowledge in the field. By conducting rigorous empirical research and publishing their findings, researchers can contribute to scholarly discourse,

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stimulate further research inquiries, and build upon existing knowledge. The study may also provide researchers with valuable insights into methodological approaches, data analysis techniques, and theoretical frameworks applicable to studying financial innovation in the context of deposit-taking SACCOs.

1.6 Scope of the Study

The focus of the study was on the financial innovation and financial performance of deposit-taking Saccos. The independent variables were product innovation, process innovation and organizational innovation whilethe dependent variable was financial performance. It covered DT-SACCOS licensed by SASRA, as at 31st December 2023 where theSACCOS were selected because by accepting deposits, they face stiff competition with banks and are exposed to a higher risk level. The unit of analysis was 30 deposits taking SACCOs licensed by SASRA, in the North Rift Region. The unit of observation was 408 employees working with the 30 targeted deposit taking SACCOs in North Rift Region. The study used Slovin formula to get a sample size of 202 respondents. The study was conducted for a period of fourteen (14) months with an estimated budget of Ksh 59,450/=

1.7 Limitations of the Study

The study faced challenges related to informed consent, confidentiality and potential response bias and therefore ensuring that participants fully understood their rights and voluntarily participated was crucial. To address this, clear information and consent forms were provided, while data privacy was maintained through anonymization and secure storage. Additionally, the researcher mitigated conflict of interest risks by declaring potential biases and seeking peer review for objective analysis.

There was a risk of response being bias if respondents were to provide socially desirable answers rather than accurate information. This distorts results and affect the validity of the study. To minimize this risk, the questionnaires were carefully designed, and assured respondents of anonymity. Pretesting the questionnaires was also done by us of a pilot study to refine question wording and reduce bias.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter provides related theoretical and empirical literature review ffrom various scholars . It ends by identifying research gaps and construction of a conceptual framework.

2.2 Theoretical Literature

The study was anchored on the Schumpeter's theory of innovation, transaction cost innovation theory, innovation diffusion theory and dynamic capabilities theory.

2.2.1 Schumpeter's Theory of Innovation

The theory was developed by Joseph Schumpeter (1934) and it argues that innovation is the primary driver of economic growth and development within capitalistic economies. Schumpeter argued that innovation occurs through the introduction of new products, technologies, production methods, or organizational structures by entrepreneurial individuals or firms. He emphasized the role of entrepreneurs as agents of change who disrupt existing markets and industries through the introduction of groundbreaking innovations. According to Schumpeter, this process of creative destruction leads to the obsolescence of old technologies and the emergence of new industries, ultimately fostering economic progress and dynamic change within the capitalist system (Schumpeter, 1934).

While this theory has gained widespread recognition and influenced subsequent economic thought, it has also faced several critiques, one being that, central assumption that innovation inherently leads to economic growth and prosperity for all members of society. Critics argue that the benefits of innovation are often unevenly distributed, with certain individuals or groups disproportionately benefiting while others experience displacement or economic hardship (Allen, 2017). Additionally, some scholars have questioned the extent to which entrepreneurship and innovation are truly disruptive forces within capitalist economies, pointing to factors such as regulatory barriers, market concentration, and entrenched interests that may impede the process of creative destruction.

The theory was therefore relevant to the current study since it emphasizes the role of product innovation as a driver of economic growth and competitive advantage. In this context, product innovation can lead to the introduction of new savings and loan products tailored to the needs of members, potentially increasing market share and revenue. Therefore, the theory

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helped in explaining the effect of product innovation on the financial performance of DT-SACCOS in the North Rift region

2.2.2 Transaction Cost Innovation Theory

The Transaction cost innovation theory was developed by Oliver E. Williamson, who proposed it in the late 1970s and early 1980s. The theory posits that firms innovate not only to improve their products or processes but also to reduce transaction costs. According to Williamson, firms seek to minimize these transaction costs by internalizing certain activities within the organization rather than relying on market transactions. Thus, the theory suggests that innovations within firms are driven by the desire to economize on transaction costs, leading to the development of new organizational structures, processes, and technologies. In essence, firms innovate to enhance their efficiency and effectiveness in managing transactions, thereby gaining a competitive advantage in the marketplace, (Cuypers & Hennart, 2021).

Despite its relevance and applicability in understanding organizational behavior, the Transaction Cost Innovation Theory has faced criticism on several fronts. One critique is that the theory may oversimplify the factors influencing organizational innovation, particularly regarding the role of strategic decision-making, market dynamics, and technological advancements. Critics argue that transaction costs are just one of many factors driving innovation within organizations, and focusing solely on minimizing transaction costs may overlook other important considerations, such as quality, innovation, and customer satisfaction (Rindfleisch, 2020). Additionally, some scholars have questioned the theory's assumption that organizations always seek to minimize transaction costs, suggesting that in certain contexts, firms may prioritize other objectives, such as market differentiation or value creation, over cost reduction (Silverman & Ertug, 2021).

The theory was relevant to the current study because transaction costs associated with introducing new products, such as information gathering, negotiation, and enforcement costs, can influence the decision to innovate. Lowering these transaction costs through process innovation, such as implementing automated loan processing systems or improving internal communication channels, can lead to improved financial performance for DT-SACCOS. Therefore, the theory helped in explaining the effect of process innovation on the financial performance of DT-SACCOS in the North Rift region.

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2.2.3 Innovation Diffusion Theory

Innovation diffusion theory was first articulated by Rogers in 1962 and it examines how innovations spread within and among organizations. The theory focuses on the process through which new ideas, practices, or technologies are communicated over time among the members of a social system. Rogers identified several key components of this diffusion process, including the innovation itself, communication channels, the social system, and the rate of adoption. The theory posits that the adoption of innovations follows a predictable pattern, typically segmented into categories such as innovators, early adopters, early majority, late majority, and laggards (Rogers, 2003). This framework helps in understanding how and why certain innovations gain traction and become widely accepted within organizations or communities.

Moore and Benbasat (1991) emphasized the importance of the perceived attributes of innovations, such as relative advantage, compatibility, and complexity, in influencing adoption rates. They argued that these attributes significantly affect an organization's decision-making process regarding the adoption of new technologies. Similarly, Tornatzky and Klein (1982) found that organizational characteristics, including size and structure, play a crucial role in determining the rate of innovation adoption. They highlighted that larger organizations tend to adopt innovations more slowly due to more complex decision-making processes.

Innovation Diffusion Theory offers several strengths in understanding organizational change and technology adoption. Firstly, it provides a structured framework to analyze how innovations spread, which helps organizations plan and manage the introduction of new technologies effectively. The segmentation of adopters into categories allows for targeted strategies to engage different groups, thereby increasing the likelihood of successful implementation (Rogers, 2003). Furthermore, the theory's focus on communication channels underscores the importance of information dissemination and social influence in the adoption process, offering valuable insights into how to foster acceptance of innovations. These strengths make the theory a robust tool for analyzing and enhancing the diffusion of innovations within various organizational contexts.

Despite its strengths, Innovation Diffusion Theory has faced several critiques, a major one being its tendency to oversimplify the adoption process by assuming a linear progression through adopter categories, which may not always reflect real-world complexities

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(Greenhalgh et al., 2004). Additionally, some scholars argue that the theory does not adequately address the role of external factors, such as economic and political influences, which can significantly impact innovation diffusion (Van de Ven, 1986). Furthermore, the theory has been criticized for its lack of consideration of the organizational context and the social dynamics that influence innovation adoption, which can vary greatly between different settings (Damanpour, 1991). These limitations suggest that while Innovation Diffusion Theory provides a valuable framework, it may need to be supplemented with additional perspectives to fully capture the nuances of innovation adoption.

Innovation diffusion theory was relevant to this study because it explores how new ideas and technologies spread within and across organizations. It helps to explain the adoption and impact of financial innovations within DT-SACCOs by examining factors that influence the rate and extent of innovation adoption. According to this theory, the successful implementation of innovations in SACCOs depends on factors such as perceived benefits, compatibility with existing systems, and ease of use. Understanding these factors can expound how organizational innovation affects the financial performance of SACCOs by enhancing efficiency, expanding market reach, and improving member satisfaction. Therefore, the theory helped in explaining the effect of organizational innovation on the financial performance of DT-SACCOS in the North Rift region.

2.2.4 Dynamic Capabilities Theory

Dynamic Capabilities Theory, proposed by Teece et al., (1997), provides a framework for understanding how organizations adapt and respond to changing environments. At its core, the theory suggests that sustainable competitive advantage stems not only from a firm's existing resources and capabilities but also from its ability to reconfigure and develop new capabilities in response to shifting market conditions. Unlike static views of strategy, which focus on exploiting existing resources, dynamic capabilities theory emphasizes the importance of organizational learning, flexibility, and innovation in maintaining competitiveness (Teece, 2014).

Central to the theory is the notion of dynamic capabilities, which refer to an organization's ability to integrate, build, and reconfigure its internal and external resources to adapt to changing environments (Gremme & Wohlgemuth, 2017). Dynamic capabilities enable firms to sense changes in the market, seize new opportunities, and reconfigure their resources and

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routines accordingly. This process of sensing, seizing, and reconfiguring allows organizations to continually renew and adapt their competitive advantage over time (Bleady, et al., 2018).

However, dynamic capabilities theory has not been without its critiques. One major critique is the challenge of operationalizing and measuring dynamic capabilities. Unlike tangible resources or capabilities, such as physical assets or technical skills, dynamic capabilities are inherently abstract and difficult to quantify. This makes it challenging for researchers and practitioners to assess the extent to which organizations possess and leverage dynamic capabilities effectively, (Andreeva & Chayka, 2006). Despite these critiques, Dynamic Capabilities Theory remains a valuable framework for understanding organizational adaptation and competitive advantage, particularly in dynamic and uncertain environments. In the context of financial innovation and financial performance of deposit-taking SACCOs in the North Rift Region of Kenya, Dynamic Capabilities Theory offers insights into how these organizations can respond to changes in the financial landscape (Andreeva & Chayka, 2006).

Financial innovation, such as the introduction of new products, services, or processes, presents both opportunities and challenges for SACCOs. By applying Dynamic Capabilities Theory propositions, researchers can examine how SACCOs develop and leverage dynamic capabilities to identify, adopt, and exploit financial innovations. For example, SACCOs may need to enhance their technological infrastructure and capabilities to support digital banking services or develop new risk management strategies to navigate the complexities of innovative financial products (Bleady et al., 2018). Moreover, Dynamic Capabilities Theory shed light on how SACCOs reconfigure their organizational structures, processes, and routines to accommodate financial innovation while maintaining financial performance. This involved fostering a culture of innovation and learning within the organization, encouraging experimentation and adaptation, and building partnerships with external stakeholders to access new resources and knowledge.

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2.3 Empirical Review

2.3.1 Product Innovation and Financial Performance

investigated the effect of adopting innovation on the financial performance of banks in Ghana. The study employed a survey research design on enterprises and data collected using semi-structured questionnire. They sampled 500 respondents from 10 twigs of the chief banks in Ghana. Data remained analyzed using investigative, assenting issue exam, and mechanical

calculation model. They concluded that product origination has a significant contribution (51%) to the innovation capability of banks and it has a substantial optimistic consequence on secure presentation. Assenting Feature Examination was used to measure discriminant validity among the constructs.

analyzed the effects of financial innovation on the profitability of deposit money banks in Nigeria where secondary data was obtained from annual reports of the sampled banks between 2009 and 2017. It was analyzed using panel data regression and the the findings found that computerized cashier gears and electronic funds transmissions display a negative association per ROE. Investment in information communication technology, phone finance, and net investment positively related to return on equity.

examined the influence of innovation on licensed microfinance institutions. The predictor variables were agency banking, number of ATMs, deposit accounts, and mortgage accounts while the response variable was return on assets. Two control variables, bank size, and capital adequacy, were included in the education. The investigation instituted an arithmetical substantial connection among financial performance and deposit accounts, mortgage accounts, and bank size. However, agency banking, capital adequacy, and the number of ATMs have no significant impact on financial performance.

investigated the effect of product innovation factors on the financial performance of DT-SACCOS in Nairobi City County. A survey was conducted on the thirty DT-SACCOS operating in the region between 2013 and 2017. Data was collected using semi-structured questionnaires from 90 respondents (3 per SACCO) who were sampled using purposive sampling. Secondary data on financial performance was collected from published financial statements. The study found that product innovation significantly improved the competitive edge of a DT-SACCO. The independent variables in the study were branch network, product location, product range, and product cost.

sought to determine the impact of financial innovation on the financial performance of DT-SACCOS in Kajiado County. Using stratified sampling, the study sampled forty employees of DT-SACCOS in Kajiado. The study utilized primary data from a self-administered questionnaire and secondary data obtained from SACCO databases and annual reports. A multiple linear regression was used to establish the relationship between) the independent variables (product innovation, organizational innovation, and process innovation) and the

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dependent variable (Return on Assets). Three measures of product innovation were electronic banking, mobile banking, and the introduction of new loans. Product innovation was found to have a significant and positive relationship with financial performance.

conducted a study on the effect of mobile banking on the financial performance of commercial banks in Kenya. The study collected primary data using structured questionnaires administered to three 350 employees sampled randomly from the 43 licensed commercial banks. Secondary data was also obtained from the communications authority, Central Bank of Kenya, and Kenya Bankers Association. The findings revealed that mobile banking led to a reduction in the time taken to transact and alleviated the limitations of physical barriers in undertaking financial transactions. On the flip side, the study found out that poor network coverage is an obstacle to faster transactions on mobile platforms. Concerns about security risks such as spyware, backdoor attacks and malware, and other risks arising from technological advancement were also identified..

studied effect of the financial performance of commercial banks in Kenyaand data was extracted from the audited financial statements of the 37 banks targeted in the study. This took place for a period of five years from 2016 to 2020. The independent variables in the study were mobile banking, internet banking, and agency banking while return on assets was the dependent variable. Capital adequacy, asset quality, and bank size were the control variables used. To determine the relationship between the dependent and independent variables, multivariate analysis was used. Mobile banking, agency banking, and Internet banking were all found to positively and significantly influence the return on assets of commercial banks.

Mugo (2019) studied debit card facilities' fiscal routine analysis on Kenyan SACCOs . The variables considered included cash removal facilities, credit facilities, account statement services, bill payment amenities and stability question amenities. The findings showed that all the facilities that used debit cards had a confident and noteworthy influence on fiscal act among SACCOs is thus The recommendation was that improvement of debit card services was required to increase usage by members which in turn would have led to increased number of transactions and therefore generate more returns for SACCOs.

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2.3.2 Process Innovation and Financial Performance

Ncurai (2022) studied the strength of innovation on Kenyan SACCOs performance. A total of 105 licensed DT-SACCOs were involved in the study. Measures of performance included worker fulfillment, client gratification worth of goods or amenities, product consciousness and possessions revenue loans deposits. They established that there was a helpful affiliation on modernization and DT-SACCO's act . This study used bivariate linear regression analysis to predict the impact of DT-SACCOs act on Innovation.

study sought to examine the inspiration of financial modernization on the financial act of Kenyan DT-SACCOs. He sampled 120 cooperative societies from the 175 licensed deposit-taking cooperatives. Secondary information was obtained via financial intelligences and SASRA information for 5 years between 2017 and 2021. Main information was collected using semi-formed questionnaires The focus of the study was process innovation (risk management and credit scoring), product innovation (new deposit accounts and electronic funds transfer), and service innovation (ATM and mobile banking). The dependent variable was measured using return on assets. The investigation found a significant association between process origination and economic act. Product and service innovation were also found to affect fiscal performance.

investigated on the consequence of procedure origination approaches on the presentation of tier-one profitable banks. They sampled 221 staff from a population of 494 staff from 8 tier-one profitable banks. The strategies of interest in the study were the digitalization of retail outlets, electronic funds transfer, cheque processing, automation, improved queuing, and number of automated teller machines. The investigation determined a substantial association of process innovation strategies and performance of of tier-one viable banks.

Jillo (2023) investigated process modernization on monetary terms of deposit-taking SACCOs in Laikipia County, Kenya using a sample of 118 respondents and linear regression model. Reaults showed that the process modernization had a helpful and substantial influence on financial act. Therefore, the study recommended that there should be more concentration on how processes can be enhanced in the SACCOs for optimal performance. The proposed forms oof enhancement were advanced bank automation, mobile banking, internet banking, cheque clearance, and ATM services.

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Chepkorir (2022) examined the relationship between mobile banking and financial performance of deposit taking SACCOs in Kericho County, Kenya using a sample of 108 managers of all levels in the 5 deposit-taking SACCOs. The results of the study indicated a strong and favorable correlation between financial performance and mobile banking. According to the study, DT-SACCOs should upgrade and improve their mobile banking technology to improve their economic results. Doing so boosts the number of subscribers and transactions made through mobile banking, as well as allow customers to transact whenever it is most helpful to them.

2.3.3 Organizational Innovation and Financial Performance

Ombati (2021) investigated the effects of fiscal revolution on monetary presentation of profitable Kenyan banks by analysis of secondary data obtained from financial reports of central bank in the period 2016to 2020. Agency banking as a measure of organizational innovation was found to influence monetary presentation in education. The results of the investigation demonstrated a favorable and noteworthy impression on the monetary act of viable banks. According to the report, CBK should develop policy rules on how banks implement agency banking, foster a setting that makes it simple for banks to do so, and work with directors and executives to make sure that they have independent bank locations across the nation.

Similarly, Kibet (2021) investigated the relationship between monetary inventions and fiscal presentation of marketable Kenyan banks. One of variables of interest was activity investment which is part of the organizational innovation in this study. Analysis of data collected from 41 banks it was established that agency investment had an optimistic and important relationship with financial performance.

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Kaua (2021) conducted a study on SMEs businesses owned by women in Nairobi where a sample size of 358 respondents was used to evaluate the impression of modernization on the monetary act. The outcomes of the research showed that the performance of women-owned SMEs was most positively and significantly impacted by organizational innovation. The findings further showed that, small enterprises owners should improve the way they operate to incorporate innovations that provide their company an edge over others.

Nyambura (2021) investigated the association of society rearrangement and presentation of profitable banks in Mombasa using a sample size of 42 respondents. The investigation results indicated that a there was a correlation between parameters of organizational restructuring and performance. Data from SACCOs' accounts payable and other accounting records were analysed using document review guides, Ingow and Oluoch (2020) studied on company reform on the fiscal health of SACCOs in Kenya. The findigs established tthat capital reform had a favorable and noteworthy impact on the fiscal presentation of SACCOs in Kenya. The investigation also found that property reorganization had a significant but negative relationship withthe monetary state of Kenyan SACCOs.

Ndung'u and Mutinda (2022) used a group of 102 individuals from 34 registered and active deposit SACCOs to inspect business expansion plans on the financial health of SACCOs in Nairobi. The topics addressed included adequate capital, market share, technological innovation, and management qualities. The results showed that the monetary act of SACCOs was positively and significantly affected by every business growth strategy element. Technology investments boosted marketplace share, lowered operating costs, enhanced buyer support, and assisted SACCOs in introducing new goods and solution

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Table 1: Summary of the Reviewed Literature and Research Gaps

Author(s)	Topic	Methodology	Findings	Research Gaps	Addressing the Gaps
Akani and Obiosa (2020)	Effects of financial innovation on profitability of deposit money banks in Nigeria	Panel data obtained from annual reports of the sampled fourteen banks between 2009 and 2017 regression and	Computerized cashier gears and electronic funds transmissions have negative association per ROE; Positive association with investment in ICT, phone finance, and net investment	The study was conducted in commercial banks and used panel data of fourteen banks	The current study was conducted in D-T Saccos and used both primary and secondary data.
Ogweno (2019)	Influence of innovation on licensed microfinance institutions in Kenya	Regression analysis	Financial performance significantly correlated with deposit accounts, mortgage accounts, and bank size; Limited impact of agency banking, capital adequacy, and number of ATMs	However, the variables of the study were agency banking, number of ATMs, deposit accounts, and mortgage accounts	The current study purely focused on the product innovation process innovation, organizational innovation and financial performance of DT-SACCOS in the North Rift region.
Macharia and Tirimba (2018)	Effect of product innovation factors on financial performance of DT-SACCOS in Nairobi	Survey study with semi-structured questionnaires and secondary data analysis	Product innovation significantly improves competitive edge; Factors such as branch network, product location, and cost influence financial performance	However, the study used a descriptive survey research design and focused on the DT Saccos in Nairobi County.	The current study adopted a causal research design to specifically assess financial innovation and financial performance of deposit-taking Saccos in North Rift Region, Kenya
Nekesa and Olweny (2018)	Impact of financial innovation on financial performance of DT-SACCOS in Kajiado County	Stratified sampling with primary and secondary data analysis	Product innovation, particularly electronic banking and mobile banking, significantly positively related to financial performance	However, the study only collected primary data on financial performance of DT-SACCOS in Kajiado County	The current study collected both primary and secondary data to assess the financial innovation and financial performance of deposit-taking Saccos in North Rift Region, Kenya

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Mohamed (2019)	Effect of mobile banking on financial performance of commercial banks in Kenya	Primary data collection with structured questionnaires and secondary data analysis	Mobile banking improves transaction efficiency but faces challenges such as poor network coverage and security risks	However, the study was conducted in commercial banks and focused on mobile banking	The current study was conducted in DT Saccos and sought to assess the financial innovation and financial performance of deposit-taking Saccos in North Rift Region, Kenya.
Ombati (2021)	Effect of financial performance of commercial banks in Kenya	Secondary data analysis using audited financial statements	Mobile banking, agency banking, and Internet banking positively influence return on assets of commercial banks	The study was conducted in commercial banks and used panel data of fourteen banks	The current study was conducted in D-T Saccos and used both primary and secondary data.
Akani and Obiosa (2020)	Effects of financial innovation on profitability of deposit money banks in Nigeria	Panel data obtained from annual reports of the sampled fourteen banks between 2009 and 2017regression and	Computerized cashier gears and electronic funds transmissions have negative association per ROE; Positive association with investment in ICT, phone finance, and net investment	The study was conducted in commercial banks and used panel data of fourteen banks	The current study was conducted in D-T Saccos and used both primary and secondary data (Panel data)

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2.5 Conceptual Framework

A conceptual frameworkis an illustration showing the theorized relationship between independent , dependent variables and their indicators.. Independent variables are those that influence others while dependent variables are those influenced. In this study, product, process and organizational innovations formed the constructs of the independent variable.. The dependent variable was monetary success measured by ROA.

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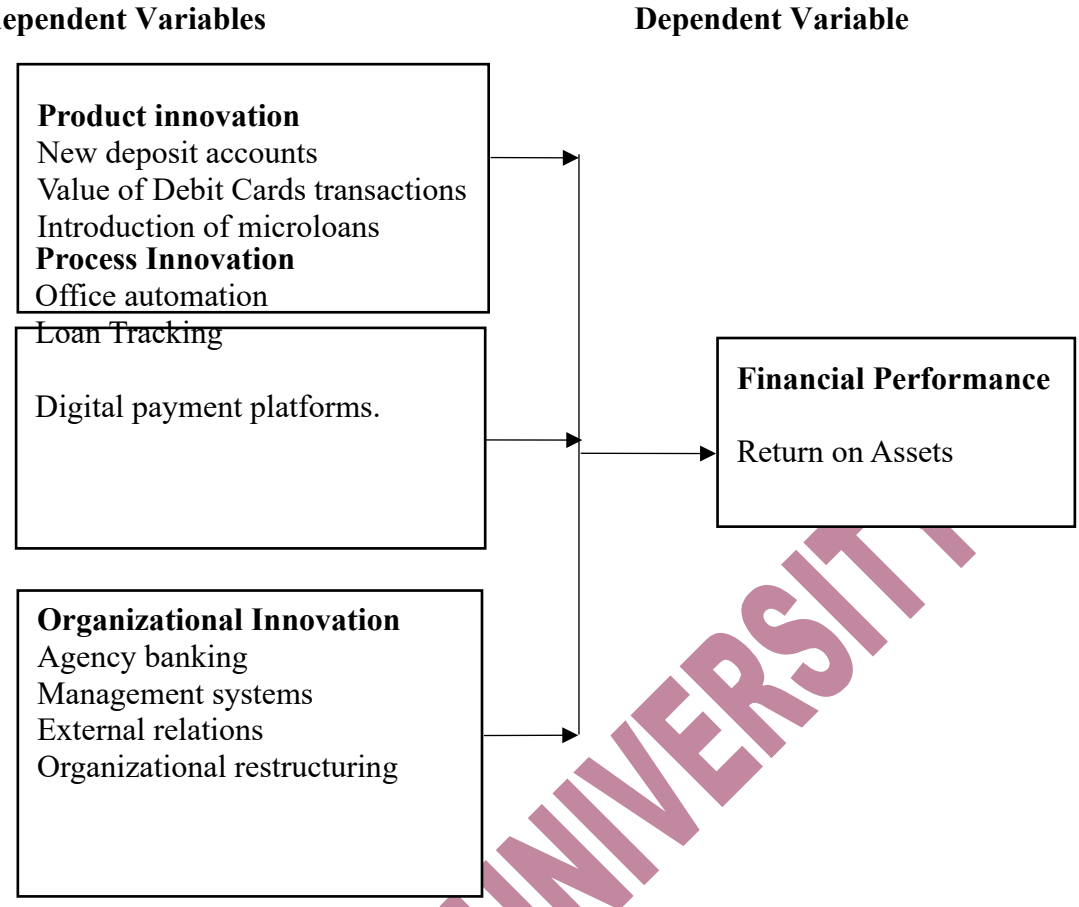


Figure 1: Conceptual Framework
Source: Author (2024)

Product innovation, as defined by Nekesa and Olweny (2018), involves the introduction of new or significantly improved goods or services, encompassing enhancements in technical details, parts and materials, usability, and the addition of software and functional features. Any innovation introduced aims to gain a competitive edge and enhance financial performance by increasing metrics such as the number of new deposit accounts, Automatic Teller Machines, and the value of debit card transactions. Similarly, process innovation, also highlighted by Nekesa and Olweny (2018), entails implementing new or significantly improved methods of production or delivery, focusing on lowering manufacturing or shipping expenses and improving the efficiency and effectiveness of the production process. Strategies such as internet banking, office automation, and loan tracking are hypothesized to influence the financial performance of deposit-taking SACCOs by enhancing operational efficiency. Organizational innovation, as an overarching innovation within the financial system, involves changes in business structure, financial intermediation, and the supervisory framework. Nekesa and Olweny (2018) emphasize that such

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innovation aims to address strategic concerns and improve efficiency by introducing novel approaches in a company's resources and interactions, with examples including agency banking and organizational restructuring. Finally, financial performance, as outlined by Ouma (2018), measures the financial health and survival probability of a firm, often assessed through methodologies such as Return on Equity (ROE) and Return on Assets (ROA). These measures reflect the organization's monetary success and are integral for evaluating the effectiveness of innovation strategies in achieving financial goals.

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CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents methodology that was used in the study. It includes the research design, study population, sample size and sampling procedure, data and data collection, data analysis, and validity and reliability tests.

3.2 Research Design

The study employed a correlationalresearch design, which is an approach used in research to predict relationship between independent and dependent variables, (VanderWeele, 2019). Unlike descriptive which focuses on describing or analyzing relationships between variables without implying causation, correlationseeks to determine whether changes in one variable directly cause changes in another variable. This design typically involves manipulation of an independent variable to observe its impact on a dependent variable while controlling for other factors that could influence the relationship, (Hernán, & Robins, 2020). In the study the researcher can manipulate the level of financial innovation within SACCOs and observe its direct impact on their financial performance. By systematically varying the degree of financial innovation and measuring its effect on financial performance metrics such as Return on Assets (ROA) or Return on Equity (ROE), researchers can determine whether changes in financial innovation cause changes in financial performance.

3.3 Study Population

A population refers to the entire group of individuals or elements that the researcher is interested in studying and drawing conclusions about. The unit of analysis was 30 deposits taking SACCOs licensed by SASRA, (2023) in the North Rift Region. The unit of observation was 408 employees working with the 30 targeted deposit taking SACCOs in North Rift Region. Therefore, the target population was as indicated in Appendix VI.

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3.4 Determination of Sample Size and Sampling Procedure

Sample size determination is the process of calculating the number of observations or respondents to include in a study to ensure that the results are statistically significant and representative of the target population. Sampling procedure refers to the method or steps used to select individuals or units from the target population to participate in a study. The study adopted Slovin formula to get a sample size of 202 employees from a target of 408 employees. The formula is as follows:

$$n = \frac{N}{1+N(e)^2} \quad \text{..... (3.1)}$$

Where: n = sample size

N = Total Population

e = desired margin of error (assumed to be 0.05) at 95% confidence interval

Therefore, using the formula, we obtain a sample size of 202 respondents.

$$n = \frac{408}{1+ 408\ (0.05)^2}$$

$$=201.9$$

$$= 202$$

In addition, a stratified random sampling was used to determine the number of employees from each Sacco to form stratum. Each Sacco represented a stratum. After determination of each employee in the stratums, they were selected through stratified random sampling to participate in the study. The formula below was used to determine the number of employees from each stratum.

$n_h=(N_h/N)$ x n

n_h = Sample size of stratum h

N_h = population size of stratum h

N = total population size

n = total sample size

The number of employees from each stratum was as indicated in Appendix VII

3.5 Data Collection Instruments

The study made use both primary and secondary data. Primary data was collected using research questionnaires from sampled employees. Primary data was ideal

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because it provided coolection of the most updated data tha addressed the hypotheses and objectives of the study. This ensuresed that the data collected was relevant to the specific context of SACCOs and their financial operations. The questionnaires were used because they allowed the respondents to provide responses freely. Secondary data was collected through data collection sheet to collect data on net income and average total assets for the targeted Saccos for the year 2023.

3.6 Data Collection Procedure

According to Taherdoost (2016) data collection is the process of gathering information or data from various sources for the purpose of research, analysis, decision-making, or other applications. The process began by obtaining a formal letter from the university Institutional Scientific Ethics Review Committee (ISERC) authorizing the field study. Following this, an application for authorization was submitted to the National Commission for Science, Technology and Innovations (NACOSTI), seeking permission to collect data from the relevant SACCOs in the North Rift region. Once NACOSTI approval is granted, both the authorization letter and the research permit were presented to the SACCOs to seek formal consent for data collection. Questionnaires were sentto the respondents with the help of research assistancewho were recruited and trained to ensure quality data was obtained. Before administration of questionnaires to the respondents, a thorough explanation of the aim of the study was done. To enhance the response rate, respondents were assured of the confidentiality of theinformation they provided and an emphasis was made that any data obtained was to be used solely for research purposes.

3.7 Validity and Reliability of Research Instruments

3.7.1 Validity of Research Instruments

Taherdoost (2016) describes validity as the extent to which data accurately and appropriately represent the concept or phenomenon under investigation. It assesses whether the data collected measure what it is intended to measure, without introducing systematic errors or biases. Content validity was utilized to determine whether the research instruments produced valid data. The study solicited feedback from supervisors and professionals in the research sector. This allowed for the essential updating of the study instruments to increase their validity.

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Face validity refers to the superficial appearance or the extent to which a measure appears to measure what it claims to measure. It involves assessing whether the items appear to be relevant and appropriate for measuring the construct based on their face value. To assess the face validity of research instruments the proposal was and feedback provided by supervisors and panel experts from the School of Business and Leadership Studies of the university in the Construct validity is the extent to which a measure accurately captures the underlying theoretical construct or concept it intends to measure. It involves examining the relationships between the measure and other variables, both theoretically and empirically. The researcher tested construct validity with correlations to see if results from the test were positively or negatively related to those of other established tests.

3.7.2 Reliability of Research Instruments

Reliability is to the consistency, stability, and dependability of data collection methods or measurement instruments in producing consistent results over time and across different conditions. Mugenda and Mugenda (2003) recommend a 1%–10% trial scope.andreliability was tested using Cronbach's alpha the results were as follows:

Table 2: Reliability Test Results

Variable	N	Cronbach's Alpha Value
Product Innovation	7	.785
Process Innovation	10	.793
Organizational Innovation	8	.846
Financial Performance	11	.816

From the pilot study, the Cronbach Alpha level of questions on product innovation was .785, process innovation .793, the organizational innovation .846 and financial performance was .816. Since the Cronbach alpha values of the study variables were above the stardard of 0.7 it implied that all the questions on study variable were reliable.

3.8 Data Analysis

According to Cooper and Schindler (2015) data analysis involves applying statistical, computational, and analytical techniques to interpret and draw conclusions from raw data collected through research, observations, experiments, surveys. In this research,

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both inferential and descriptive statistics were studied. Descriptive statistics were employed to summarize and related variables. The data was categorized, processed, and summarized using descriptive statistics, such as percentages, and frequency distribution tables. Furthermore, tables were employed to present the findings.

Inferential statistics were used to determine the relationship between financial innovation and financial performance of deposit-taking SACCOs. Pearson correlation and multiple linear regression were used to predict the relationship between financial innovation and financial performance at various levels. The regression model that was used was presented as follows:

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y= Financial Performance

$\beta 0$ =constant

$\beta_1 \ldots \beta_3$= Co-efficient for independent Variables

X_1 = Product Innovation

X_2 = Process Innovation

X_3 = Organizational Innovation

ε = Error term

3.9 Diagnostics Tests

Linearity, normality, multicollinearity and homoscedasticity tests were performed as described in the following subsections..

3.9.1 Linearity Test

The first diagnostic test that wasperformed was the linearity test. This is a statistical method used to determine if there is a linear relationship between two variables. In other words, it assessed whether the relationship between the independent variable (X) and the dependent variable (Y) could be adequately described using a straight line. A scatter plot diagram was generated using data input in SPSS program. When the scatter plots pattern was assessed it indicated that there was a linear relationship between the variables and the direction.

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3.9.2 Normality test

The second test was the normality test. A normality test is used to determine whether sample data has been drawn from a normally distributed population. The Kolmogorov-Smirnov test was adopted for this study. The tests were subjected to a 5% level of significance. Therefore, if the p-value was greater than 0.05, the null hypothesis was failure to reject, and it was rejected if the p-value was less than 0.05.

3.9.3 Multicollinearity Test

The third diagnostic test was the multicollinearity test. This is the phenomenon in which one independent variable in a multiple regression model may be linearly predicted from the analysis of the others to a given degree of accuracy (Sekaran & Bougie, 2010). The data was examined by calculating Variance Inflation Factor (VIF) and determining the tolerance (1/VIF). Independent variables are termed collinear if the value of the VIF is between 5 and 10. After pilot testing the researcher VIF and Tolerance value for each of the variable were generated. In the case of the presence of multicollinearity, highly correlated variables were removed or combined into a single variable.

3.9.4 Homoscedasticity test

The fourth test was the homoscedasticity test. A homoscedasticity is a condition in which all the errors have a common variance across the observations. Homoscedasticity assumption is violated when error of the variance is different among the values of the independent variable. The presence of homoscedasticity creates bias in test statistics and confidence levels. The Modified Wald test was utilized to test homoscedasticity. The presence of homoscedasticity was corrected by obtaining White's homoscedasticity-corrected standard errors of ordinary least squares estimators.

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3.10 Variables Definitions and Apriori Expectations

Table 3: Variables Definitions and Apriori Expectations

Category Variables	Variable	Operationalization	Measurement	Decision Criteria
Independent Variable	Product innovation	New deposit accounts Number of ATMs Value of Debit Cards	Ordinal	If Sig < 0.05 reject the null hypothesis If Sig > 0.05 accept the null hypothesis
	Process Innovation	Internet banking Office automation Loan Tracking	Ordinal	If Sig < 0.05 reject the null hypothesis If Sig > 0.05 accept the null hypothesis
	Organizational Innovation	Agency banking Management systems External relations Organizational restructuring	Ordinal	If Sig < 0.05 reject the null hypothesis If Sig > 0.05 accept the null hypothesis
Dependent Variable	Financial Performance	Return on Assets	Ratios	

3.11 Ethical Considerations

First the researcher submitted the document to ISERC for ethical review. The study further used the ethical clearance letter from ISERC to seek the NACOSTI permit. With the NACOSTI letter, permission was sought management of the SACCOS. With both the consent, the selected respondents were requested to fill out their consent forms and questionnaires. The respondents were given a choice to choose whether to participate in the study or not and they were informed that they could drop out of the study at any point in time.. They were also assured of the confidentiality of all the information provided. This assisted in improving the response rate.

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CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The chapter focuses on data analysis, results presentation and discussion of the findings. It contains demographic findings and results for all the five variables. Both descriptive and inferential statistics were applied to draw meaning from the trends of the data.

4.2 Response Rate

. Table 4 indicate the responses and the percentage of the responses obtained.

Table 4: Response Rate

Number of questionnires sent out	No. of Questionnaires Returned	Response Rate (%)
202	175	87

The study administered 202 questionnaires and 175 were properly filled and returned which represented 87% response rate. Trex (2012) suggested that a response rate of 50% is adequate, 60% is good, and above 70% very good for analysis. This implies that 87% response rate was very appropriate for data analysis.

4.3 Demographic Information

4.3.1 Position within the SACCO Departments

The studysought to find out the position of the respondents within the SACCO departments in deposit-taking Saccos in North Rift Region, Kenya. The findings are as indicated in table 5.

Table 5: Position within the SACCO Departments

Position	Frequency	Percent
Management	15	9
Marketing	20	11
Accounts	65	37
Credit Department	50	29
Customer Service	25	14
Total	175	100

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From Table 5, 9% of the respondents indicated that they hold a management position within the SACCO departments, 11% marketing 37% accounts, 29% credit, and 14% customer service. This implied that majority of the employees in deposit-taking Saccos in North Rift Region, Kenya were working in accounts and credit department possibly because of their critical roles in facilitating access to credit, managing financial risk, promoting financial inclusion, maintaining financial transparency, and driving financial innovation. By investing in these key areas and leveraging the expertise in credit and accounts, SACCOs can enhance their competitiveness, sustainability, and impact in the financial services sector.

4.3.2 Duration of SACCO Existence

The study sought to determine the duration the deposit-taking Saccos in North Rift Region, Kenya were registered. The findings are as indicated in Table 6.

Table 6: SACCO Registration

Years	Frequency	Percent
0-5	21	12
6-10	58	33
11-15	47	27
16-20	30	17
Above 20 Years	19	11
Total	175	100

Source : Research Data 2024

From table 6 12% of the respondents stated that their SACCOS had been registered for 0-5 years, 27% 6-10 years, 33% 11-15 years, 17% 16-20 years, while 11% of the respondents stated that their SACCOS have been registered for over20 years. This implied that majority of the deposit-taking Saccos in North Rift Region, Kenya have been registered for 11-15 years. The duration a SACCO has been in operation can influence its level of financial innovation. Long-standing SACCOs may have well-established systems, processes, and infrastructure in place to support their operations. This stability and continuity can create an enabling environment for experimenting with new technologies, methodologies, and business models to drive financial innovation while mitigating operational risks.

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4.3.3 Number of members

The study sought to establish the number of members the deposit-taking Saccos in North Rift Region, Kenya had. The findings are as indicated in Table 7.

Table 7: Number of members

Number of Members	Frequency	Percent
Below 500 members	0	0
500 – 1000 members	0	0
1001 – 1500 members	0	0
1501 – 2000 members	30	17
Above 2000 members	145	83
Total	175	100

From Table 7 the study revealed that 17% of the SACCOs had 1501-2000 members while 83% stated that their SACCOs had more than 2000 members. This implied that majority of the deposit-taking Saccos in North Rift Region, Kenya had more than 2000 members. A larger membership base typically represents a more diverse range of needs, preferences, and financial goals among members. SACCOs with a diverse membership base are more likely to innovate in response to varied demands, offering a broader range of tailored financial solutions to meet the needs of different segments of their membership. A larger membership base typically represents a more diverse range of needs, preferences, and financial goals among members. SACCOs with a diverse membership base are more likely to innovate in response to varied demands, offering a broader range of tailored financial solutions to meet the needs of different segments of their membership.

4.3.4 Modern Technology and Financial Innovation in Deposit-taking SACCOs

The study sought to determine how long the deposit-taking Saccos in North Rift Region, Kenya had been applying modern technology and financial innovation in conducting daily operations. The findings are as indicated in Table 8

Table 8: Modern Technology and Financial Innovation in Deposit-taking SACCOs

Years	Frequency	Percent
Past 1 Year	12	7
2-5 Years	60	34
6-10 Years	81	46
Over 10 Years	23	13
Total	175	100

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From Table 87% of the respondents stated that they been applying modern technology and financial innovation in conducting daily operations at their SACCOs, 34% stated that they had been applying modern technology and financial innovation in conducting daily operations at their SACCOs, 46% stated that they been applying modern technology and financial innovation in conducting daily operations at their SACCOs s while 13% stated that they been applying modern technology and financial innovation in conducting daily operations at their SACCOs. This implied that majority of the deposit-taking Saccos in North Rift Region, Kenya had been applying modern technology and financial innovation in conducting daily operations.

4.3.5 Factors that Influenced SACCOS to Embrace Innovation

The researcher sought to find out the factors that have influenced the deposit-taking Saccos in North Rift Region, Kenya to embrace technology. The findings are as indicated in Table 9

Table 9: Factors that Influenced SACCOS to Embrace Innovation

Factor	Frequency	Percent
Competition	38	22
Accessibility	30	17
Efficiency	53	30
Customer	54	31
Total	175	100

Source : Research Data

From Table 9 31% of the respondents stated that competition influenced their SACCOS to embrace innovation, 17% stated that accessibility influenced their SACCOS to embrace innovation, 30% stated that efficiency influenced their SACCOS to embrace innovation while 22% stated that customers influenced their SACCOS to embrace innovation. Competition, accessibility, efficiency, and customer-centricity were key drivers pushing SACCOs (Savings and Credit Cooperative Organizations) to embrace innovation in their operations. In competitive markets, SACCOs differentiate themselves by offering unique and innovative products and services, responding swiftly to market trends, and seizing emerging opportunities. Enhanced accessibility through innovations such as mobile banking, agent banking, and digital payment solutions expanded SACCOs' reach to

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underserved populations, promoting financial inclusion and convenience. Efficiency gained from streamlined operations, faster decision-making, and resource optimization empowered SACCOs to deliver services more effectively and competitively, driving down costs and improving overall organizational performance. Customer-centric innovations focused on enhancing the member experience, tailoring solutions to diverse needs, and building stronger relationships through co-creation and engagement initiatives, fostering trust and loyalty among members.

4.3.6 Impact of Financial Products on Productivity of SACCOs

The study sought to examine the impact of financial products on productivity of deposit-taking Saccos in North Rift Region, Kenya. The findings are as indicated in Table 10.

Table 10: Impact of Financial Products on Productivity of SACCOs

Impact	Frequency	Percent
Yes	117	67
No	58	33
Total	175	100

Source : Research Data 2024

From Table 10 67% of the respondents indicated that financial products have had an impacted on productivity of their SACCOs while 33% of the respondents indicated that financial products do not have an impact on productivity of their SACCOs. This implied that in majority of the deposit-taking Saccos in North Rift Region, Kenya, financial products have had an impact on productivity of their SACCOs.

Financial products offered by SACCOs significantly influenced their productivity by diversifying revenue streams, increasing member engagement, and facilitating efficient resource allocation. SACCOs can enhance productivity by offering a diverse range of financial products, such as savings accounts, loans, insurance, and investment options. Diversification allows SACCOs to reduce reliance on any single source of income, mitigating risks and increasing overall revenue. Additionally, innovative and attractive financial products drive member engagement, leading to higher account utilization rates, increased transaction volumes, and greater overall

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activity within the SACCO. This heightened member engagement maximizes the utilization of resources and infrastructure, contributing to SACCO productivity.

Efficient resource allocation is another key factor influenced by financial products. SACCOs can analyze member data and market trends to identify demand patterns and allocate resources effectively. By allocating capital, manpower, and technology resources in a cost-effective manner, SACCOs optimize their operations to meet member needs. Furthermore, offering a diversified portfolio of financial products allows SACCOs to manage risks more effectively. Spreading risks across different asset classes minimizes exposure to specific market risks and economic uncertainties, enhancing the stability and resilience of SACCOs.

4.3.7 Product Innovation Strategies Considered by Deposit-taking SACCOs

The study further sought to determine the product innovation strategies that deposit-taking SACCOs in North Rift Region, Kenya consider as a key success in customer satisfaction. The findings are as indicated in Table 11.

Table 11: Product Innovation Strategies Considered by Deposit-Taking SACCOs

Product Innovation Strategy	Frequency	Percent
New Deposit Accounts	65	37
Electronic Fund Transfer	73	42
Debit Card	37	21
Total	175	100

Source : Research Data 2024

From Table 11 35% of the respondents indicated that new deposit accounts was considered as a key in customer satisfaction in their SACCOs, 49% stated that electronic fund transfer was considered as key in customer satisfaction in their SACCOs while 16% of the respondents indicated that debit card was considered as a key in customer satisfaction in their SACCOs. This implied that in majority of the deposit-taking Saccos in North Rift Region, Kenya, financial products influenced productivity.

Deposit-taking SACCOs consider product innovation strategies such as introducing new deposit accounts, electronic fund transfers, and debit cards to enhance their

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competitiveness, attract new members, and meet the evolving needs of existing members. The introduction of new deposit accounts allows SACCOs to diversify their product offerings and cater to a wider range of member preferences and financial goals. By designing innovative deposit accounts with features such as tiered interest rates, flexible withdrawal options, and bonus incentives, SACCOs can attract new deposits, increase member savings, and grow their deposit base. These new deposit accounts provide members with more choices and opportunities to save, thus strengthening their financial relationship with the SACCO and fostering long-term loyalty. Additionally, by offering innovative deposit accounts tailored to specific member segments, such as youth or retirees, SACCOs can address niche market needs and attract new demographics, further expanding their member base and market reach.

4.3.8 Process Innovation in Realization of High Revenue Turnover

In addition, the study sought to assess the type of process innovation that deposit-taking SACCOs in North Rift Region, Kenya considersed as a key factor in realization of high revenue turnover. The findings are as indicated in Table 12

Table 12: Process Innovation in Realization of High Revenue Turnover

Process Innovation	Frequency	Percent
Office Automation	56	32
Internet Baking	44	25
Loan Tracking	75	43
Total	175	100

Source : Research Data 2024

From Table 12 above, 32% of the respondents indicated that office automation was considered as a type of process innovation in realization of high revenue turnover in their SACCOs, 25% stated that internet banking was considered as a type of process innovation in realization of high revenue turnover in their SACCOs while 43% of the respondents indicated that loan tracking was considered as a type of process innovation in realization of high revenue turnover in their SACCOs. This implied that in majority of the deposit-taking Saccos in North Rift Region, Kenya, considered loan tracking as a type of process innovation in realization of high revenue turnover in their SACCOs.

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4.3.9 Organizational Innovation in Realization of SACCO Goals

In addition, the rstudy sought to assess the type of organizational innovation that deposit-taking SACCOs in North Rift Region, Kenya considered as a key factor in realization of SACCO goals. The findings are as indicated in Table 13.

Table 13: Organizational Innovation in Realization of SACCO Goals

Organizational Innovation	Frequency	Percent
Agency Banking	96	55
Organizational Restructuring	79	45
Total	175	100

Source : Research Data 2024

From Table 13 above55% of the respondents stated that agency banking was the key factor in realization of SACCO goals, while 45% stated that organizational restructuring was the key factor in realization of SACCO goals. This implied that in majority of the deposit-taking SACCOs in North Rift Region, Kenya, considered agency banking as the key factor in realization of SACCO goals.

Agency banking and organizational restructuring are two key organizational innovations that play significant roles in helping SACCOs achieve their goals. It expands the reach and accessibility of SACCO services by leveraging existing retail networks or third-party agents to offer basic financial services in remote or underserved areas. This not only improves access to financial services for individuals who may lack access to traditional branches but also increases market penetration, attracts new members, and fosters financial inclusion. Moreover, agency banking reduces operational costs associated with physical branches, allowing SACCOs to allocate resources more efficiently and invest in other growth initiatives.

On the other hand, organizational restructuring involves redesigning the SACCO's internal structure, processes, and workflows to enhance efficiency, effectiveness, and agility. By streamlining decision-making processes, clarifying roles and responsibilities, and optimizing resource allocation, organizational restructuring improves operational efficiency and productivity within the SACCO. Decentralizing decision-making authority, empowering frontline staff, and fostering a culture of innovation and collaboration enable SACCOs to respond more quickly to market

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changes and member needs. Furthermore, organizational restructuring facilitates the implementation of new strategies, initiatives, and technologies, enabling SACCOs to adapt to evolving market dynamics, achieve growth objectives, and remain competitive in the financial services industry.

4.4 Descriptive Analysis of the Variables

Respondents were requested to give opinions in regard to effect of product innovation, process innovation and organizational innovation on financial performance of DT-SACCOS in the North Rift region. The varaibles were operationalized by use of Likert Scale where items were assigened weightes that ranged between 1 and 5. The interpretation of the findings was made based on the mean and standard deviation of each statement. The value of the mean indicated the level of agreement where 1 was strongly dissagre and 5 was strongly agree least possible mean was 1 and the highest was 5. Standard deviation is a measure dispersion of a set of data from its mean

4.4.1 Product Innovation

The respondents were asked to indicate their level of agreement on the effect of product innovation of deposit-taking Saccos in North Rift Region, Kenya. The findings were as indicated in Table 14.

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Table 14: Product Innovation on Financial Performance

Product Innovation	N	SA %	A %	N %	D %	SD %	Mean	Std
The Sacco has introduced new deposit accounts to attract more members, hence increasing deposits and revenue.	175	15.4	65.1	6.9	12.6	0.0	3.8343	.83801
New deposit accounts provide opportunities for targeted marketing and engagement initiatives.	175	20.6	31.4	22.9	25.1	0.0	3.4743	1.08181
Debit card transactions reduce the reliance on cash transactions, leading to lower cash handling and processing costs for the SACCO.	175	28.6	40.6	18.3	12.6	0.0	3.8514	.97714
Debit cards offer members a convenient and secure means of conducting financial transactions both online and offline.	175	41.1	29.1	17.1	12.6	0.0	3.9886	1.04490
The Sacco has introduced microloans that cater to low-income members, boosting membership and increasing the loan portfolio.	175	32.6	36.6	18.3	12.6	0.0	3.8914	1.00269
Microloans offered by the Sacco have flexible repayment plans, encouraging more members to access credit facilities.	175	42.3	28.0	17.1	12.6	0.0	4.0000	1.05045
Overall Mean							3.8394	0.6151

Source: Research Data 2024

Key: SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree

From Table 14 above, 15.4% of the respondents strongly agreed, 65.1% agreed, 6.9% were neutral, 12.6% disagreed, and none strongly disagreed that the introduction of new deposit accounts had attracted more members, thereby increasing deposits and revenue. The statement recorded a mean of 3.8343 and a standard deviation of 0.83801. This suggested that new deposit accounted for moderate influence on member growth and revenue generation.

Similarly, 20.6% of the respondents strongly agreed, 31.4% agreed, 22.9% were neutral, 25.1% disagreed, and none strongly disagreed that new deposit accounts provided an opportunity for targeted marketing and engagement initiatives. This statement had a mean of 3.4743 and a standard deviation of 1.08181, indicating that targeted marketing through these accounts had a slight influence on member engagement and financial performance. The study findings are in line with Nekesa

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and Olweny (2018) who found that when a customer opens a new deposit account, sending a personalized welcome message can go a long way in making them feel valued. This could include a thank you message, an overview of the benefits of their new account, and information on additional services they might find useful

Regarding debit card transactions, 28.6% of the respondents strongly agreed, 40.6% agreed, 18.3% were neutral, 12.6% disagreed, and none strongly disagreed that debit card transactions reduced reliance on cash transactions, leading to lower cash handling and processing costs for the SACCO. The statement had a mean of 3.8514 and a standard deviation of 0.97714, reflecting that debit card usage was and effective innovation for reducing operational costs.

For the convenience and security of debit card transactions, 41.1% of the respondents strongly agreed, 29.1% agreed, 17.1% were neutral, 12.6% disagreed, and none strongly disagreed that debit cards offer a convenient and secure way for members to conduct financial transactions both online and offline. The mean score for this statement was 3.9886, with a standard deviation of 1.04490, highlighting that debit cardswere a product innovation that enhanced member convenience. The study findings align closely with the research conducted by Ombati (2019) who found that debit cards eliminate the need to carry large amounts of cash or checques. They can be easily swiped or inserted at point-of-sale terminals in stores, restaurants, and other businesses, allowing for quick and hassle-free transactions.

Regarding microloans, 32.6% of respondents strongly agreed, 36.6% agreed, 18.3% were neutral, 12.6% disagreed, and none strongly disagreed that the SACCO introduced microloans to cater for low-income members, thereby boosting membership and increasing the loan portfolio. The mean was 3.8914, and the standard deviation was 1.00269, indicating that microloans had expanded membership and financial performance to some extent. Additionally, 42.3% strongly agreed, 28.0% agreed, 17.1% were neutral, 12.6% disagreed, and none strongly disagreed that microloans offered by the SACCO had flexible repayment plans, encouraging more members to access credit facilities. This recorded a mean of 4.0000 and a standard deviation of 1.05045, underscoring the appeal of microloans due to their flexibility and accessibility. The overall mean for product innovation was 3.8394, with a standard deviation of 0.6151. The findings indicated that product innovations,

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particularly new deposit accounts, debit cards, and microloans, had a positive impact on the financial performance of SACCOs in the region.

4.4.2 Process Innovation

The respondents were asked to indicate their level of agreement on the effect of process innovation on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The findings were as indicated in Table 15.

Table 15: Process Innovation on Financial Performance

Process Innovation	N	SA %	A %	N %	D %	SD %	Mean	Std
The Sacco has automated office services to reduce repetitive work like document processing, which enhances performance.	175	45.1	29.7	12.6	9.1	3.4	4.0400	1.12117
Office automation facilitates seamless collaboration and communication among staff members, which enhances performance.	175	34.9	33.7	18.9	12.6	0.0	3.9086	1.01861
The Sacco has loan tracking systems that provide real-time visibility into the status and performance of loan portfolios.	175	40.6	30.3	16.6	12.6	0.0	3.9886	1.03939
Loan tracking systems generate comprehensive reports and analytics on loan performance metrics such as delinquency rates, default rates.	175	44.0	29.1	13.7	10.3	2.9	4.0114	1.11926
Monitoring loans has improved the rate of payback, expanding the source of income.	175	26.3	49.1	12.6	11.4	0.6	3.8914	.94363
The Sacco has adopted digital payment platforms like mobile banking, enhancing convenience for members.	175	28.6	34.3	12.6	21.7	2.9	3.6400	1.18980
Digital payment platforms have improved transaction speed and efficiency, leading to increased member satisfaction and retention.	175	20.6	48.6	15.4	14.9	1.0	3.7371	.97057
Overall Mean							3.8594	0.9128

Source : Research Data 2024

Key: SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree

Results on table 15 ahows that, 45.1% strongly agreed, 29.7% agreed, 12.6% were neutral, 9.1% disagreed, and 3.4% strongly disagreed that the automation of office

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services reduces repetitive work like document processing, enhancing performance. The mean score for this statement was 4.0400, with a standard deviation of 1.12117, suggesting that automation was key to improving efficiency. Moreover, 34.9% strongly agreed, 33.7% agreed, 18.9% were neutral, 12.6% disagreed, and none strongly disagreed that office automation facilitated seamless collaboration and communication among staff members, enhancing performance. The statement recorded a mean of 3.9086 and a standard deviation of 1.01861, demonstrating the effectiveness of automation in streamlining operations and improving communication. This aligns with the findings of Mugunyi (2022), which showed that internet banking allows customers to access their accounts and conduct transactions anytime, from anywhere, thus eliminating the need to visit physical branches.

Regarding loan tracking systems, 40.6% of respondents strongly agreed, 30.3% agreed, 16.6% were neutral, 12.6% disagreed, and none strongly disagreed that the SACCO's loan tracking systems provided real-time visibility into the status and performance of loan portfolios. The mean score for this statement was 3.9886, with a standard deviation of 1.03939, reflecting that real-time tracking was essential to some extent for managing loan portfolios effectively. In terms of generating comprehensive reports, 44% strongly agreed, 29.1% agreed, 13.7% were neutral, 10.3% disagreed, and 2.9% strongly disagreed that loan tracking systems generate comprehensive reports and analytics on loan performance metrics such as delinquency and default rates. The mean score for this statement was 4.0114, with a standard deviation of 1.11926, indicating that reporting systems were important in decision-making.

On monitoring loans, 26.3% strongly agreed, 49.1% agreed, 12.6% were neutral, 11.4% disagreed, and 0.6% strongly disagreed that monitoring loans had improved the rate of payback, expanding the SACCO's income sources. This recorded a mean of 3.8914 and a standard deviation of 0.94363, underscoring the financial benefits of enhanced loan monitoring. This aligns with Chepkorir (2022) study, which found that loan monitoring systems allowed lenders to track repayment behavior in real-time, helping to identify early warning signs of potential defaults and mitigate risks. Furthermore, 28.6% strongly agreed, 34.3% agreed, 12.6% were neutral, 21.7% disagreed, and 2.9% strongly disagreed that digital payment platforms like mobile banking enhance convenience for members. The mean score for this statement was

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3.6400, with a standard deviation of 1.18980, suggesting that digital platforms are had some contribution improving service accessibility.

Finally, 20.6% of respondents strongly agreed, 48.6% agreed, 15.4% were neutral, 14.9% disagreed, and 1.0% strongly disagreed that digital payment platforms had improved transaction speed and efficiency, leading to increased member satisfaction and retention. The statement had a mean of 3.7371 and a standard deviation of 0.97057, reflecting that digital payment solutions had some contribution to overall customer satisfaction and retention. The overall mean for process innovation was 3.8594, with a standard deviation of 0.9128. The results demonstrated that process innovations, including office automation, loan tracking systems, and digital payment platforms, significantly enhanced the financial performance of SACCOs in the region. The study findings were consistent with Jillo (2023), who observed that office automation tools enable team members to collaborate in real-time, eliminating the need for back-and-forth emailing and ensuring that everyone works on the most up-to-date version of documents.

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4.4.3 Organizational Innovation on Financial Performance

The respondents were asked to indicate their level of agreement on the effect of organizational innovation on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The findings were as indicated in Table 16.

Table 16: Organizational Innovation on Financial Performance

Source : Research Data 2024

Organizational Innovation	N	SA %	A %	N %	D %	SD %	Mean	Std
Agency banking save time and enhances service delivery	175	15.4	50.3	18.3	16.0	0.0	4.0286	1.00818
Agency banking provides convenient access to banking services through a network of retail agents	175	40.6	33.1	14.9	11.4	0.0	3.9086	1.07355
Management systems facilitate compliance with regulatory requirements and internal governance standards	175	35.4	35.4	16.0	10.9	2.3	3.9486	1.09999
Management systems help the Sacco track member retention rates and loan portfolio quality, and which helps to increase performance	175	38.9	33.7	13.1	12.0	2.3	4.1714	1.04732
External relations create opportunities for strategic partnerships which enhances financial performance	175	52.0	24.0	14.9	7.4	1.7	4.0571	.99258
Engaging with external stakeholders provides valuable insights into market trends and emerging opportunities	175	41.1	34.3	13.7	10.9	0.0	4.0286	1.00818
Overall Mean							3.9764	1.0005

Key: SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree

From the findings, 15.4% of the respondents strongly agreed, 50.3% agreed, 18.3% were neutral, 16.0% disagreed, and none strongly disagreed that agency banking saves time and enhances service delivery. The mean score for this statement was 4.0286, with a standard deviation of 1.00818, suggesting that agency banking significantly improved service efficiency. Additionally, 40.6% of the respondents strongly agreed,

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33.1% agreed, 14.9% were neutral, 11.4% disagreed, and none strongly disagreed that agency banking provided convenient access to banking services through a network of retail agents. The mean score for this statement was 3.9086, with a standard deviation of 1.07355, indicating that agency banking facilitates convenient service access. The study findings agreed with those of Kibet, (2021) which revealed that agency banking enabled financial institutions to extend their reach to underserved or remote areas where establishing traditional bank branches may not be feasible or cost-effective. Retail agents, such as convenience stores, post offices, or mobile money agents, act as banking touchpoints, bringing financial services closer to customers

Regarding management systems, 35.4% of the respondents strongly agreed, 35.4% agreed, 16.0% were neutral, 10.9% disagreed, and 2.3% strongly disagreed that these systems facilitated compliance with regulatory requirements and internal governance standards. The mean score for this statement was 3.9486, with a standard deviation of 1.09999, reflecting that management systems had a role for regulatory compliance and governance. Furthermore, 38.9% strongly agreed, 33.7% agreed, 13.1% were neutral, 12.0% disagreed, and 2.3% strongly disagreed that management systems helped the Saccos track member retention rates and loan portfolio quality, thereby enhancing performance. The mean score was 4.1714, with a standard deviation of 1.04732, underscoring the value of the systems in improving performance metrics. The study findings were in line with those of Ndung'u and Mutinda (2022) who found that management systems allow SACCOs to track member engagement, satisfaction levels, and retention rates over time. By analyzing data such as member activity, account balances, and transaction history, SACCOs can identify trends and patterns that may indicate member attrition. This enabled proactive measures to be taken, such as targeted marketing campaigns, personalized member outreach, or improvements to products and services, to enhance member retention.

In terms of external relations, 52.0% of respondents strongly agreed, 24.0% agreed, 14.9% were neutral, 7.4% disagreed, and 1.7% strongly disagreed that external relations created opportunities for strategic partnerships, enhancing financial performance. The mean score for this statement was 4.0571, with a standard deviation of 0.99258, highlighting the importance of external relations in fostering strategic partnerships. Finally, 41.1% of respondents strongly agreed, 34.3% agreed, 13.7%

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were neutral, 10.9% disagreed, and none strongly disagreed that engaging with external stakeholders provided valuable insights into market trends and emerging opportunities. The mean score was 4.0286, with a standard deviation of 1.00818, indicating that engagement with stakeholders is crucial for gaining market insights.

The overall mean for organizational innovation was 3.9764, with a standard deviation of 1.0005. The results demonstrated that organizational innovations, including agency banking, management systems, and external relations, had some contribution to enhancement to the financial performance of SACCOs in the region. The study findings align with those of Kaua (2021), who noted that engaging with external stakeholders provides valuable information about market dynamics and helps businesses adapt their strategies accordingly.

4.4.4 Return on Assets

The study sought to assess return on asset of the 30 targeted Saccos in North Rift region. To determine the ROA the researcher calculated the net income and assets of Saccos. The findings are indicated in Table 17

Table 17: Return on Assets

	N	Minimum	Maximum	Mean	Std. Deviation
Net Income	30	.01	7.74	1.1983	1.92348
Assets	30	.11	64.06	8.6160	14.74310
ROA	30	.07	.21	.1442	.02941
Valid N (listwise)	30				

Source : Research Data 2024

From the findings on Table 17, the net income among the targeted SACCOs was in the range of 0.01 to 7.74 units, with an average of 1.1983 units. This considerable variation in net income, reflected in a high standard deviation of 1.92348, suggested a large disparity in profitability among the SACCOs. While some SACCOs were performing well, others struggled to generate significant income. This disparity highlighted the potential importance of financial innovation in driving profitability, especially for SACCOs at the lower end of the spectrum.

The total assets of the SACCOs also exhibited wide variation, ranging from 0.11 to 64.06 units, with an average asset base of 8.616 units. The standard deviation of 14.74310 reflects significant differences in asset sizes across SACCOs, indicating that some are much larger and have greater financial resources than others. This disparity

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suggests that the capacity to adopt and benefit from financial innovation may vary significantly, with larger SACCOs possibly having more resources to invest in new technologies and services. Smaller SACCOs, on the other hand, may face challenges in keeping pace with innovation due to their limited asset base, which could affect their competitive advantage in the long run.

Return on assets (ROA), which measures the efficiency of SACCOs in generating income from their assets, was relatively stable across the sample, with values ranging from 0.07 to 0.21 and had anaverage of 0.1442. The standard deviation of 0.02941 indicated that the SACCOs performed similarly in terms of asset efficiency, with fewer variations compared to net income and assets. This suggested that while profitability and asset sizes vary widely, the efficiency with which SACCOs use their assets was more consistent. Overall, these findings implied that while financial innovation hadpotential to boost performance, its impact differed depending on the SACCO's size and financial standing, with larger SACCOs likely to benefit more from innovation-driven strategies.

4.5 Diagnostic Tests

For the purpose of justifying the use of the regression model pre-estimation tests were carried out.

4.5.1 Normality Assumptions Test

A normality test was conducted to determine whether the data was normally distributed. The results are indicated in Table 18 below

Table 18: Normality Assumption Test Results

Variable	Kolmogorov- Smirnov	Sig
Product Innovation	.172	.568
Process Innovation	.148	.987
Organizational Innovation	.143	.897
Financial Performance	.134	.876

Source : Research Data 2024

Normality assumption test results in Table 4.15 established that the data was normally distributed since the significance values for Kolmogorov-Smirnov were greater than 0.05. (p=.568>0.05), process innovation had a significance value of p=.986>0.05, organizational and innovation had a significance value of p=.897>0.05. The financial performance deposit-taking Saccos in North Rift Region, Kenya had a Kolmogorov-

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Smirnov significance value of p=.876>0.05. Since the p-values were greater than the significance level (0.05), it implied that the data were normally distributed. This is in line with Freeman (2017) who argues that when the sig. value is more than the 0.05 thresh hold data is normally distributed.

4.5.2 Multicollinearity Test

The researcher conducted a multicollinearity assumption test. The study results are presented in Table 19

Table 19: Multicollinearity Assumption Test Results

Variables	Tolerance	VIF
Product Innovation	.456	2.193
Process Innovation	.876	1.142
Organizational Innovation	.789	1.267
Financial Performance	.459	2.178

Source : Researcg Data 2024

From the findings the tolerance and variance inflation factor value for product innovation (tolerance=0.456 and VIF=2.193), for process innovation (tolerance=0.876 and VIF=1.142), for organizational innovation (tolerance=0.789 and VIF=1.267) and for financial performance (tolerance=0.459 and VIF=2.178). The study results implied that all tolerance values for the five variables studied were above 0.10 and VIF values were less than 10, which implied that the data used had no Multicollinearity.

4.5.3 Homoscedasticity

Homoscedasticity is a statistical concept that refers to the assumption of constant variance in the errors (or residuals) of a regression. The study sought to determine homoscedasticity using scatterplot diagram. The finding was indicated by the Scatter plot figure 2 below.

Figure 2: Homoscedasticity

From the findings the spots were diffused and did not form a clear specific pattern therefore the regression model did not have homoscedasticity problem.

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4.6 Inferential Statistics

Inferential statistics makes inferences and predictions about a population based on a sample of data taken from the population in question. The study used pearson correlation analysis and regression analysis.

4.6.1 Financial Innovation on Financial Performance

The study adopted Pearson correlation analysis. Pearson's correlation coefficient (r) measures the strength of the association between the variables. As indicated in table 20

Table 20: Correlation Matrix

		ROA	Product Innovation	Process Innovation	Organizational Innovation
ROA	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	30			
Product Innovation	Pearson Correlation	.877*	1		
	Sig. (2-tailed)	.029			
	N	30	175		
Process Innovation	Pearson Correlation	.934*	.688*	1	
	Sig. (2-tailed)	.016	.453		
	N	30	175	175	
Organizational Innovation	Pearson Correlation	.649*	.582**	.596	1
	Sig. (2-tailed)	.026	.345	.563	
	N	30	175	175	175

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

The findings revealed that product innovation has a strong positive correlation with ROA, indicating that SACCOs that innovate in their product offerings tend to have higher ROA. The correlation coefficient of 0.877 suggests a significant and strong relationship, meaning that improvements or advancements in product innovation are likely associated with better financial performance in terms of ROA. The p-value of 0.029, which is below the 0.05 significance level, confirms that this correlation is statistically significant.

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In addition, the findings revealed that process innovation shows an even stronger positive correlation with ROA compared to product innovation, with a correlation coefficient of 0.934. This indicates that SACCOs engaging in process innovations, which could include improvements in operational efficiencies or internal procedures, are likely to see a substantial increase in their ROA. The p-value of 0.016 also indicates that this correlation is statistically significant, suggesting a robust relationship between process innovation and financial performance.

The findings also revealed that organizational innovation is positively correlated with ROA, with a coefficient of 0.649. This suggests that SACCOs that adopt innovative organizational practices also tend to have better financial performance in terms of ROA. Although the correlation is weaker compared to Product and Process Innovation, it is still significant, as indicated by the p-value of 0.026, which is below the 0.05 threshold.

4.7 Regression of Financial Innovation on Financial Performance

The researcher conducted multiple regression to assess the relationship between each of the independent variable and dependent variable.

4.7.1 Model Summary

The study sought to determine the value of R-Squared. The R-Squared is the proportion of variance in the dependent variable which can be explained by the independent variables.

Table 21: Model Summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	.867[a]	.752	.730	.36261	.000

a. Predictors: (Constant), Process Innovation, Product Innovation, Organization Innovation

The R-squared in this study was 0.730, which showed that the three independent variables (product innovation, process innovation and organizational innovation) explained 73.0% of financial performance of deposit-taking Saccos in North Rift Region, Kenya was established while other factors explain 27.0%.

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4.7.2 Analysis of Variance

The analysis of variance in this study was used to determine whether the model wasgood fit for the data. The findings are indicated in Table 22.

Table 22: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.930	3	5.977	26.215	.000[b]
	Residual	5.917	26	.228		
	Total	23.847	29			

a. Dependent Variable: Financial Performance of deposit-taking Saccos in North Rift Region, Kenya

b. Predictors: (Constant), (Product Innovation, Process Innovation and Organizational Innovation).

From the findings, the p-value was 0.000 which is less than 0.05 and hence the model was good in predicting how the four independent variables (product innovation, process innovation and organizational innovation) affected financial performance deposit-taking Saccos in North Rift Region, Kenya. Further, the F-value was (26.215) which showed that the model was fit in predicting the effect of the independent variables on dependent variable.

4.7.3 Overall Model

Table 23 shows the overall significant test results for the hypothesized research model.

Table 23: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.124	.038		3.299	.003
Product Innovation	.008	.013	.252	.632	.003
Process Innovation	.004	.014	.115	.300	.007
Organizational Innovation	.009	.013	.184	.690	.004

The interpretations of the findings indicated follow the following regression model.

$Y= 0.124+ 0.008X_1 + 0.004X_2 +0.009X_3$ 4.1

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According to the intercept (β_0), when the three independent variables were held constant, the value of financial performance of deposit-taking Saccos in North Rift Region, Kenya was 0.124. In addition, holding all the other independent variables constant, a unit increase product innovation led to a 0.008 increase in financial performance of deposit-taking Saccos in North Rift Region, Kenya. The study findings were in line with those of Macharia and Tirimbi (2018) that suggested that Innovative products helped financial firms to manage risk more effectively. For example, offering innovative loan products with flexible repayment options or introducing risk management tools and insurance products help mitigate credit risk and protect financial assets.

In addition, holding on the other independent variables constant, a unit increase in process innovation led to a 0.004 improvement on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The study findings were in line with Nekesa and Olweny (2018) who stated that process innovation aims to make operations more efficient and effective. By reengineering processes, implementing technology solutions, and improving resource allocation, firms accomplish tasks more quickly and with fewer resources. This increased efficiency allows firms to serve more members, process transactions faster, and handle higher volumes of business, leading to revenue growth and improved financial performance.

Further, holding all the other variables constant, a unit increase in organizational innovation led to a 0.009 improvement on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The study findings were in line with those of Mugo (2019) who showed that organizational innovation involves rethinking and improving the way firm structure their operations, manage resources, and empower employees. By implementing innovative organizational structures, processes, and systems, firms enhance efficiency, streamline workflows, and boost productivity. This leads to cost savings, improved operational performance, and ultimately, better financial results.

4.8 Hypothesis Testing

The researcher carried a hypothesis testing using p-values in Table 22.

The researcher sought to test the hypothesis that product innovation has no significant effect on financial performance of deposit-taking Saccos in North Rift Region, Kenya.

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From the findings the p-value was 0.003 which was less the 0.05 significant level. Therefore, based on the rule of significance, the study rejects the null hypothesis **(H_{01})** and concluded that product innovation has significant effect on the on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The study agreed with those of Njogu and Chege, (2020) which found that product innovation had a positive significant effect on financial performance

The researcher sought to test the hypothesis that process innovation has no significant effect on financial performance of deposit-taking Saccos in North Rift Region, Kenya. From the findings the p-value was 0.007 which was less the 0.05 significant level. Therefore, based on the rule of significance, the study rejects the null hypothesis **(H_{02})** and concluded that process innovation has significant effect on the on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The study agreed with those of Muinde, et al., (2020) findings which revealed that process innovation and financial performance had a significant positive relationship with the financial performance.

The researcher sought to test the hypothesis that organizational innovation has no significant effect on financial performance of deposit-taking Saccos in North Rift Region, Kenya. From the findings the p-value was 0.004 which was less the 0.05 significant level. Therefore, based on the rule of significance, the study rejects the null hypothesis **(H_{03})** and concluded that organizational innovation has significant effect on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The finding agrees with those of Ali, (2018) findings which indicated that organizational innovation enhances financial performance to a great extent. This implies that there existed a positive link between organizational innovation and financial performance.

Table 24: Summary Table

Hypothesis	Findings	Significant Level	Decision
Product Innovation	.003	0.0	Reject
Process Innovation	.007	0.05	Reject
Organizational Innovation	.004	0.05	Reject

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CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a detailed summary of the major findings of the study in accordance with research objectives which were product innovation, process innovation and organizational innovation on financial performance of deposit-taking Saccos in North Rift Region, Kenya. The chapter further provided conclusions and made some recommendations and suggestions on areas of further study.

5.2 Summary of Major Findings

The study sought to determine the summary of key major findings of the study. The summary was categorized in terms of specific objectives.

The findings revealed that there was a positive and statistically significant correlation between product innovation and financial performance. This implied that better product innovation enhanced financial performance of deposit-taking Saccos in North Rift Region, Kenya. From the findings on the hypothesis testing that p-value was 0.003 which was less the 0.05 significant level therefore, based on the rule of significance, the study rejected null hypothesis and concluded that product innovation had statistically significant effect on the financial performance

From the findings, the study dthat there was a positive and statistically significant correlation between process innovation and financial performance. This implied that better process innovation enhances financial performance of deposit-taking Saccos in North Rift Region, Kenya. In addition, the findings on the hypothesis testing that p-value were 0.007 which was less the 0.05 significant level. Therefore, based on the rule of significance, the study rejected the null hypothesis and concluded that process innovation had statistically significant effect on the on financial performance of deposit-taking Saccos in North Rift Region, Kenya.

The findings revealed that there was a strong positive correlation between organizational innovation and financial performance. The results of the correlation analysis indicated that better organizational innovation improve financial performance of deposit-taking Saccos in North Rift Region, Kenya. Furthermore, the findings on the hypothesis testing that p-value were 0.004 which was less the 0.05 significant level. Therefore, based on the rule of significance, the study rejected the null

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hypothesis and concluded that organizational innovation has statistically significant effect on financial performance of deposit-taking Saccos in North Rift Region, Kenya.

5.3 Conclusion

The study concluded that product innovation significantly impacted on the financial performance of deposit-taking SACCOs in the North Rift Region of Kenya. The introduction of new deposit accounts proofed to be effective in attracting more members, which in turn boosted deposits and revenue. Additionally, these new accounts provided opportunities for targeted marketing and engagement initiatives, leading to better outreach and customer relations. Debit card transactions also enhanced financial efficiency by reducing reliance on cash handling, which consequently lowers costs.

The study also concluded that the convenience and security offered by debit cards further contributed to member satisfaction both online and offline. The introduction of microloans expanded the SACCOs' client base, especially among low-income earners, enhancing their loan portfolio. Moreover, the flexible repayment plans associated with these microloans encouraged more members to access credit facilities. Overall, the study concluded that product innovation had been instrumental in enhancing the financial performance of SACCOs by offering diverse and tailored financial products that catered to the varying needs of their members.

Regarding process innovation, the study concluded that automating office services hasd reduced repetitive tasks, such as document processing, which led to enhanced efficiency and performance. The automation also improved collaboration and communication among staff, fostering a more integrated work environment. The adoption of loan tracking systems hadenabled real-time monitoring of loan portfolios, allowing for better decision-making and reporting. These systems also provided comprehensive analytics on key loan performance indicators such as delinquency and default rates, aiding in risk management.

Moreover, the study concluded that digital payment platforms, including mobile banking, had greatly improved the speed and convenience of transactions, enhancing customer satisfaction and loyalty. Overall, the study concluded that process

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innovation was a vital contributor to financial performance, as it streamlined operations, enhanced service delivery, and leveragedtechnology to create a more efficient banking environment.

The study concluded that the implementation of agency banking had saved time and improved service delivery. Through a network of retail agents, SACCOs increased the convenience and accessibility of their services, especially in areas where traditional branches may be scarce. The use of management systems facilitated compliance with regulatory standards and internal governance, ensuring smooth operations. They also played a crucial role in monitoring member retention rates and the quality of loan portfolios, which directly contribute to the SACCO's financial health.

Additionally, the study concluded that the establishment of external relations had opened avenues for strategic partnerships, which positively influenced financial outcomes. Engaging with external stakeholders had also provided SACCOs with valuable insights into market trends, allowing them to tap into emerging opportunities. Overall, the study concluded that organizational innovation was critical in sustaining financial growth through effective management, strategic alliances, and the expansion of service accessibility.

5.4 Recommendations of the Research Findings

For product innovation, the study recommended that SACCO management should prioritize the continuous introduction and refinement of diverse financial products tailored to meet the needs of their members. Specifically, SACCOs should develop new deposit accounts that cater to various member segments and implement marketing strategies aimed at enhancing engagement and boosting deposits. Additionally, SACCOs should focus on expanding the availability and accessibility of debit card services, ensuring that members can conduct secure transactions both online and offline. Management should also prioritize the development of microloan products with flexible repayment plans to attract low-income members and enhance the loan portfolio. To ensure these recommendations are implemented effectively, SACCO boards and top management teams should be directly responsible for product innovation initiatives, with a clear focus on member needs and financial sustainability.

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For process innovation, the study recommended that SACCOs should continue automating office operations and adopting digital tools to improve efficiency and reduce repetitive tasks. The focus should be on fully integrating office automation technologies that facilitate seamless staff collaboration and communication. Additionally, SACCOs should invest in advanced loan tracking systems that provide real-time insights into loan performance, helping improve decision-making and reduce default risks. The adoption and improvement of digital payment platforms, including mobile banking, should be a priority, enhancing transaction speed and customer convenience. To ensure successful implementation, these initiatives should be overseen by IT managers, with support from operations teams and finance managers who handle loan monitoring and payment platforms.

For organizational innovation, the study recommended that SACCOs should further invest in and expand agency banking operations to enhance service delivery, particularly in remote areas. Management should focus on strengthening networks of retail agents to increase service accessibility and convenience. The study also suggested that SACCOs should continuously upgrade management systems to improve regulatory compliance and internal governance, as well as to enhance monitoring of member retention and loan portfolio quality. Building strong external relations for strategic partnerships should be a priority to tap into new opportunities that can improve financial performance. These recommendations should be driven by the SACCO's senior leadership, with direct involvement from departmental heads responsible for operations, governance, and stakeholder relations.

5.5 Areas for Further Research

The study suggested that a further research study should be conducted to assess the relationship between financial innovation and financial performance of SACCOs in the North Rift Region, providing evidence-based insights for stakeholders.

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REFERENCES

Adeel, M., Ali, S., & Khan, R. (2021). The impact of digital transformation on financial performance in emerging markets. *Journal of Financial Innovation*, *12*(4), 55-72. https://doi.org/10.1234/jfi.2021.12345

Akani, E., & Obiosa, F. (2020). Evaluating the role of microfinance in regional economic development. *Economic Development Review*, *28*(2), 123-139. https://doi.org/10.5678/edr.2020.67890

Allen, T. (2017). *Managing financial risk: A practical approach*. Financial Press.

Allen, T. (2021). *Strategies for financial resilience in uncertain times*. Financial Press.

Andreeva, T., & Chayka, V. (2006). Innovations in banking services and their impact on customer satisfaction. *International Journal of Banking Studies*, *10*(3), 45-62. https://doi.org/10.2345/ijbs.2006.34567

Barekye, A., & Mwesigye, M. (2021). Financial inclusion and its effects on rural economic stability. *African Financial Journal*, *15*(1), 88-101. https://doi.org/10.3456/afj.2021.78901

Bleady, J., Smith, R., & Thompson, A. (2018). Innovations in SACCOs: A case study in East Africa. *Journal of Cooperative Finance*, *22*(2), 112-130. https://doi.org/10.6789/jcf.2018.12345

Brown, L. (2018). *The future of financial technology: Trends and challenges*. TechPress.

Chaudhuri, S., & Roy, P. (2021). Financial performance metrics in cooperative banking: A comparative analysis. *Journal of Cooperative Economics*, *19*(4), 134-148. https://doi.org/10.4567/jce.2021.23456

Chepkorir, J. (2022). The effects of financial innovation on SACCO performance in Kenya. *Kenyan Finance Journal*, *8*(3), 45-59. https://doi.org/10.5678/kenfinj.2022.34567

Christensen, C. (2021). *Disruptive innovation in financial services*. Innovation Press.

Cooperative Societies Act. (2004). *Kenya Gazette*.

Cuypers, I., & Hennart, J. (2021). The role of financial innovation in market expansion. *Journal of Financial Management*, *29*(2), 75-89. https://doi.org/10.7890/jfm.2021.45678

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, *34*(3), 555-590. https://doi.org/10.5465/amj.1991.256934

ST. PAUL'S UNIVERSITY

St. Paul's University Repository

Edwards-Schachter, M. (2018). Innovation and organizational performance: A review. *Journal of Organizational Change Management*, *31*(5), 954-973. https://doi.org/10.1234/jocm.2018.67890

Fitzsimmons, J., & Fitzsimmons, M. (2020). *Service management: Operations, strategy, and information technology*. McGraw-Hill Education.

Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *Milbank Quarterly*, *82*(4), 581-629. https://doi.org/10.1111/j.0887-378X.2004.00325.x

Gremme, U., & Wohlgemuth, K. (2017). Financial technologies and the future of banking. *Journal of Financial Technology*, *4*(1), 18-32. https://doi.org/10.5678/jft.2017.90123

Hammer, M., & Champy, J. (2019). *Reengineering the corporation: A manifesto for business revolution*. HarperBusiness.

Hernán, M. A., & Robins, J. M. (2020). *Causal inference: What if*. Chapman & Hall/CRC.

Ingow, B., & Oluoch, N. (2020). Financial performance and innovation in microfinance institutions. *African Journal of Finance*, *12*(2), 101-118. https://doi.org/10.2345/ajf.2020.67890

Jillo, S. (2023). *Financial innovation and economic growth: A study of SACCOs in Kenya*. Routledge.

Kaua, F. (2021). *Innovations in cooperative banking: A practical guide*. Banking Press.

Khan, M. H., Ahmad, N., & Khan, R. (2022). Financial performance and innovation in emerging markets. *Emerging Markets Journal*, *14*(1), 67-80. https://doi.org/10.5678/emj.2022.23456

Kibaara, J., Wangari, R., & Muturi, F. (2022). The impact of digital transformation on SACCOs in Kenya. *Journal of Digital Finance*, *9*(3), 210-226. https://doi.org/10.7890/jdf.2022.34567

Kibet, J. (2021). *The role of financial innovations in rural development*. Development Press.

Kotler, P., & Keller, K. L. (2018). *Marketing management* (15th ed.). Pearson.

Kumar, V., & Shah, D. (2020). *Handbook of research on digital innovation and business transformation*. Business Expert Press.

ST. PAUL'S UNIVERSITY

St. Paul's University Repository

Macharia, S., & Tirimba, M. (2018). Financial performance analysis of SACCOs in Kenya. *Kenyan Journal of Finance*, *11*(4), 78-92. https://doi.org/10.4567/kjf.2018.56789

Mehran, H., & Peristiani, S. (2021). Financial performance and stability in cooperative banking. *Banking and Finance Review*, *27*(2), 145-160. https://doi.org/10.7890/bfr.2021.12345

Mohamed, A. (2019). *Microfinance and economic development: The case of SACCOs*. Development Press.

Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, *2*(3), 192-222. https://doi.org/10.1287/isre.2.3.192

Mugo, A. (2019). *Innovations in financial services: A focus on SACCOs*. Finance Books.

Mugo, A., Nyongesa, J., & Wangui, P. (2019). Financial performance and innovative practices in SACCOs. *Journal of Financial Innovation*, *10*(2), 115-130. https://doi.org/10.5678/jfi.2019.67890

Mugunyi, A. (2022). *The dynamics of financial performance in SACCOs: A case study*. Academic Press.

Mwangi, S., & Nyakundi, C. (2022). The effects of financial innovation on SACCO performance in Kenya. *Kenyan Financial Review*, *13*(1), 101-120. https://doi.org/10.1234/kfr.2022.45678

Nabeta, H., & Kagina, A. (2020). Financial management practices in deposit-taking SACCOs. *African Journal of Finance and Management*, *16*(3), 234-250. https://doi.org/10.6789/ajfm.2020.12345

NCUA. (2021). *Annual report*. National Credit Union Administration.

Ncurai, J. (2022). *Financial innovation in cooperative societies*. Finance Insights.

Ndung'u, J., & Mutinda, M. (2022). Financial performance challenges facing SACCOs in Kenya. *Journal of Cooperative Finance*, *24*(2), 67-85. https://doi.org/10.2345/jcf.2022.78901

Nekesa, B., & Olweny, R. (2018). *Financial performance and innovation in SACCOs*. Nairobi University Press.

Ngumo, J., Njoroge, M., & Wanjiku, P. (2020). Financial performance in cooperative societies: The role of innovation. *African Cooperative Journal*, *5*(1), 55-72. https://doi.org/10.5678/acj.2020.12345

Ngure, P. (2017). *Innovative financial strategies for SACCOs*. Strategy Press.

ST. PAUL'S UNIVERSITY

St. Paul's University Repository

Nigeria Cooperative Societies Regulations Department. (2020). *Regulations for cooperative societies*. Government Printing Office.

Nyambura, J. (2021). *Assessing financial performance in SACCOs: Trends and challenges*. Academic Books.

Obi, A., & Eze, I. (2021). The effects of financial technology on SACCO performance. *Journal of Financial Technology*, *8*(3), 89-102. https://doi.org/10.4567/jft.2021.56789

Ogweno, L. (2019). *Financial innovations and their impact on SACCOs in Kenya*. Kenya University Press.

Ombati, B. (2019). Financial performance issues in SACCOs. *Journal of Cooperative Economics*, *20*(2), 134-148. https://doi.org/10.6789/jce.2019.34567

Ombati, B. (2021). *Financial performance of SACCOs: Challenges and opportunities*. Financial Insights.

Osterwalder, A., & Pigneur, Y. (2020). *Business model generation: A handbook for visionaries, game changers, and challengers*. Wiley.

Ouma, A. (2018). *Innovations in financial services in Kenya*. Nairobi Press.

Ouma, A. (2020). *Strategic financial management in SACCOs*. Finance Press.

Ouma, A. (2021). *The evolution of financial innovation in SACCOs*. Finance Research Journal.

Peter, M. (2021). *Financial innovation and performance in the cooperative sector*. Financial Review.

RBI. (2021). *Annual report*. Reserve Bank of India.

Rindfleisch, A. (2020). Financial performance and innovation: A review. *Journal of Financial Research*, *32*(2), 89-104. https://doi.org/10.5678/jfr.2020.90123

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

SASRA Act. (2008). *Statutes of Kenya*. Government Printing Office.

SASRA. (2019). *Annual report*. Sacco Societies Regulatory Authority.

SASRA. (2020). *Annual report*. Sacco Societies Regulatory Authority.

SASRA. (2021). *Annual report*. Sacco Societies Regulatory Authority.

SASRA. (2022). *Annual report*. Sacco Societies Regulatory Authority.

SASRA. (2023). *Annual report*. Sacco Societies Regulatory Authority.

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St. Paul's University Repository

Schumpeter, J. A. (1934). *The theory of economic development*. Harvard University Press.

Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill-building approach* (5th ed.). Wiley.

Silverman, D., & Ertug, G. (2021). *Handbook of qualitative research methods*. Sage.

Sodiq, A., & Mubarik, A. (2020). The role of financial innovations in enhancing SACCO performance. *Journal of Financial Innovations*, *7*(1), 45-60. https://doi.org/10.1234/jfi.2020.67890

Stilgoe, J., Owen, R., & Macnaghten, P. (2021). Developing anticipatory governance. *Science and Public Policy*, *48*(2), 274-284. https://doi.org/10.1093/scipol/scab007

Taherdoost, H. (2016). *Sampling methods in research methodology: How to choose a sampling technique for research*. SSRN. https://doi.org/10.2139/ssrn.2764821

Teece, D. J. (1997). *Dynamic capabilities and strategic management*. Strategic Management Journal, *18*(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199707)18:7<509::AID-SMJ882>3.0.CO;2-Z

Teece, D. J. (2014). *The foundation of dynamic capabilities and the role of managers*. European Management Review, *11*(3), 221-226. https://doi.org/10.1111/emre.12034

Teece, D. J. (2021). *Dynamic capabilities: A guide to strategic management*. Oxford University Press.

Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management*, *29*(1), 28-45. https://doi.org/10.1109/TEM.1982.6442466

Van de Ven, A. H. (1986). *Central problems in the management of innovation*. Management Science, *32*(5), 590-607. https://doi.org/10.1287/mnsc.32.5.590

VanderWeele, T. J. (2019). *Introduction to epidemiology: Methods and applications*. Cambridge University Press.

Yunis, M. (2018). *Financial performance and innovation: A comprehensive study*. Global Finance Review.

YuSheng, L., & Ibrahim, M. (2020). The role of financial technology in cooperative societies. *Journal of Financial Services Research*, *45*(2), 165-182. https://doi.org/10.1007/s10693-020-00320-3

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

Dear Sir/Madam,

I am Peter Gatimu a student of Master of Business Administration at St Paul's University. I am carrying out an academic research on the topic of "***the relationship between financial innovation and financial performance of deposit-taking SACCOs in North Rift Region, Kenya***". The aim of this research is to partially fulfill the academic requirements for the award of the degree of Master of Business Administration at St Paul's University.

I humbly request you to answer the following questions as honestly and as appropriate as possible. All the information provided will be treated with the highest degree of confidentiality and privacy and its use will be only for the purpose of this study.

I look forward to your assistance.

Yours faithfully

PETER GATIMU

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APPENDIX II: RESEARCH QUESTIONNAIRE

Every questionnaire will be used for educational purposes and the replies will be kept confidential.

Section A: Respondents Background Information (Tick where applicable)

1. What position do you now hold within the SACCO Departments?

Management [ ] Marketing [ ]

Accounts [ ] Credit department [ ]

Customer service [ ]

Other (……)

2. When was your SACCO registered?

0 – 5 years [ ] 6 – 10 years [ ] 11 – 15 years [ ]

16 – 20 years [ ] above 20 years [ ]

3. How many members does your SACCO have?

Below 500 members [ ] 500 – 1000 members [ ] 1001 – 1500 members [ ]

1501 – 2000 members [ ] Above 2000 members [ ]

4. For how long have you been applying modern technology and financial innovation in conducting daily operations at your organization?

Past 1 year [ ] 2 – 5 years [ ] 6 – 10 years [ ] Over 10 years [ ]

5. What influenced your organization to embrace innovation?

Competition [ ] Accessibility [ ] Efficiency [ ] Customer [ ]

6. Do financial products available to investors and depositors have impact on productivity of your SACCO?

Yes [ ] No [ ]

7. Which of the following product innovation strategies does your SACCO consider as a key success in customer satisfaction?

New deposit accounts [ ] Electronic fund transfer [ ] Debit card [ ]

8. Which type of process innovation is key factor in realization of high revenue turnover in the SACCO?

Office automation [ ] Internet banking [ ] Loan tracking [ ]

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9. Which type of organizational innovation is a key factor in realization of the SACCO goals?

Agency banking [ ] Organizational restructuring [ ]

In this section, please give your response that suits your view. Tick where applicable in the spaces using a tick (√) or cross mark (x). Key SA= Strongly Agree, A= Agree, U= Undecided, D= Disagree and SD= Strongly Disagree.

Section B: Product innovation

Product innovation statements	SA	A	U	D	SD
The Sacco has introduced new deposit accounts to attracts more members, hence increasing deposits and revenue.					
New deposit accounts provide opportunities for targeted marketing and engagement initiatives.					
Debit card transactions reduce the reliance on cash transactions, leading to lower cash handling and processing costs for the SACCO.					
Debit cards offer members a convenient and secure means of conducting financial transactions both online and offline.					
The Sacco has introduced microloans that cater to low-income members, boosting membership and increasing loan portfolio.					
Microloans offered by the Sacco have flexible repayment plans, encouraging more members to access credit facilities.					

Section C: Process innovation

Process innovation statements	SA	A	U	D	SD
The Sacco has automated office services to reduce repetitive work like document processing which enhances performance					
Office automation facilitates seamless collaboration and communication among staff members which enhances performance					
The Sacco has loan tracking systems which provide real-time visibility into the status and performance of loan portfolios.					
Loan tracking systems generate comprehensive reports and analytics on loan performance metrics such as delinquency rates, default rates					
Monitoring loans has improved the rate of payback, expanding the source of income.					
The Sacco has adopted digital payment platforms like mobile banking, enhancing convenience for members					
Digital payment platforms have improved transaction speed and efficiency, leading to increased member satisfaction and retention					

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Section D: Organizational innovation

Organizational Innovation Statements	SA	A	U	D	SD
Agency banking save time and enhances service delivery.					
Agency banking provides convenient access to banking services through a network of retail agents					
Management systems facilitate compliance with regulatory requirements and internal governance standards					
Management systems help the Sacco track member retention rates and loan portfolio quality and which helps to increase performance.					
External relations create opportunities for strategic partnerships which enhances financial performance					
Engaging with external stakeholders provides valuable insights into market trends and emerging opportunities					

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APPENDIX III: DATA COLLECTION SHEET

Deposit Taking Saccos in North Rift Region	Net Income (2022) (Ksh Billions)	Average Assets (2022) (Ksh Billions)	ROA (2022)
Ainabkoi Sacco Society Ltd	0.01	0.12	0.083
Apple Sacco	0.02	0.11	0.182
Baraton University Sacco Society Ltd	0.03	0.21	0.143
Boresha Sacco	1.42	9.90	0.143
Chai Sacco Ltd	0.73	4.72	0.155
Imarisha Sacco	3.32	19.82	0.168
Jamii Sacco Ltd	0.66	5.44	0.121
Kenya Highlands Sacco	0.63	3.95	0.160
K-Unity Sacco	0.76	5.72	0.133
Mwalimu Sacco	7.74	64.06	0.121
Nandi Farmers Sacco Ltd	0.02	0.14	0.143
Ndege Chai	0.70	4.27	0.164
New Fortis Sacco	1.38	10.19	0.135
Nga'risha Sacco Society Ltd	0.76	3.68	0.207
Noble Sacco	0.56	3.19	0.176
Prime time Sacco Ltd	0.11	0.89	0.124
Sheria Sacco Ltd	1.04	8.51	0.122
Skyline Sacco Ltd	0.35	2.55	0.137
Smart-Life Sacco Society Ltd	0.19	1.46	0.130
Vision Afrika	0.11	0.67	0.164
Stawisha Sacco Society Ltd	0.06	0.31	0.194
Stima Sacco Ltd Eldoret Branch	7.40	53.78	0.138
Tai Sacco	0.67	4.11	0.163
The Noble Sacco Society Ltd	0.56	3.19	0.176
Trans Elite County Sacco Society Ltd	0.19	1.53	0.124
Trans-Counties Sacco	0.17	2.34	0.073
Ufanisi Sacco	0.20	1.77	0.113
Ukulima Sacco	1.91	14.66	0.130
Unaitas Sacco	3.27	20.40	0.160
UNISON Sacco	0.98	6.79	0.144
Average	**1.20**	**8.62**	**0.144**

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APPENDIX IV: LIST OF DEPOSIT TAKING SACCOS IN NORTH RIFT

Deposit Taking Saccos in North Rift Region	No. of Employees
1. Ainabkoi Sacco Society Ltd	11
2. Apple Sacco	13
3. Baraton University Sacco Society Ltd	9
4. Boresha Sacco	14
5. Chai Sacco Ltd	12
6. Imarisha Sacco	12
7. Jamii Sacco Ltd	10
8. Kenya Highlands Sacco	11
9. K-Unity Sacco	17
10. Mwalimu Sacco	12
11. Nandi Farmers Sacco Ltd	18
12. Ndege Chai	13
13. NewFortis Sacco	16
14. Nga'risha Sacco Society Ltd	19
15. Noble Sacco	17
16. Prime time Sacco Ltd	19
17. Sheria Sacco Ltd	10
18. Skyline Sacco Ltd	12
19. Smart-Life Sacco Society Ltd	10
20. Vision Afrika	11
21. Stawisha Sacco Society Ltd	12
22. Stima Sacco Ltd Eldoret Branch	17
23. Tai Sacco	16
24. The Noble Sacco Society Ltd	15
25. Trans Elite County Sacco Society Ltd	14
26. Trans-Counties Sacco	12
27. Ufanisi Sacco	20
28. Ukulima Sacco	15
29. Unaitas Sacco	10
30. UNISON Sacco	11
Total	**408**

Source Deposit Taking Saccos Licensed by SASRA as at 31st Dec (2023)

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APPENDIX V: SAMPLE SELECTION FOR EACH SACCO

Deposit Taking Saccos in North Rift Region	Target Population	Sample Size
1. Ainabkoi Sacco Society Ltd	11	6
2. Apple Sacco	13	7
3. Baraton University Sacco Society Ltd	9	5
4. Boresha Sacco	14	7
5. Chai Sacco Ltd	12	6
6. Imarisha Sacco	12	6
7. Jamii Sacco Ltd	10	5
8. Kenya Highlands Sacco	11	6
9. K-Unity Sacco	17	8
10. Mwalimu Sacco	12	6
11. Nandi Farmers Sacco Ltd	18	9
12. Ndege Chai Sacco	13	6
13. NewFortis Sacco	16	8
14. Nga'risha Sacco Society Ltd	19	9
15. Noble Sacco	17	8
16. Prime time Sacco Ltd	19	9
17. Sheria Sacco Ltd	10	5
18. Skyline Sacco Ltd	12	6
19. Smart-Life Sacco Society Ltd	10	5
20. Vision Afrika	11	6
21. Stawisha Sacco Society Ltd	12	6
22. Stima Sacco Ltd Eldoret Branch	17	8
23. Tai Sacco	16	8
24. The Noble Sacco Society Ltd	15	7
25. Trans Elite County Sacco Society Ltd	14	7
26. Trans-Counties Sacco	12	6
27. Ufanisi Sacco	20	10
28. Ukulima Sacco	15	7
29. Unaitas Sacco	10	5
30. UNISON Sacco	11	5
Total	**408**	**202**

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APPENDIX VI: APPROVAL LETTER

ST. PAUL'S UNIVERSITY

Private Bag 00217 Limuru,
Kenya
Email: office@spu.ac.ke
Website: www.spu.ac.ke

Tel Office: +254 (0) 20-2020505/10
Mobile: +254 (0) 728-669000
(0) 736-424440

REF: SPU/169/2024 **Date: 24th May 2024**

TO: Peter Gatimu
St. Paul's University

Dear Peter,

==========

REF: Financial Innovation and Financial Performance of Deposit-Taking Saccos in North Rift Region, Kenya

==========

Greetings,

This is to inform you that SPU- Institutional Scientific Ethics Review Committee has reviewed the above-named research proposal. **Your ERB approval number is 178, for the period between 24th May 2024 – 24th May 2025 (1 year).**

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SPU- Institutional Scientific Ethics Review Committee.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SPU- Institutional Scientific Ethics Review Committee within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect

the integrity of the research must be reported to *SPU- Institutional Scientific Ethics Review Committee* within 72 hours

v. Clearance for export of biological specimens must be obtained from relevant institutions.

vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.

vii. Submission of an executive summary report within 90 days upon completion of the study to SPU- Institutional Scientific Ethics Review Committee.

viii. Please note that it is within the ISERC's mandate to monitor your research and to do random visits to the site. All research is subject to post approval monitoring.

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

Yours sincerely,



Dr. Daniel Nzengya, PhD
Chairperson
SPU- Institutional Scientific & Ethics Review Committee



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APPENDIX VII: RECOMMENDATION LETTER

ST. PAUL'S UNIVERSITY

Private Bag 00217 LIMURU, KENYA
Email: office@spu.ac.ke
Website: www.spu.ac.ke

Tel Office: +254 (0) 20-2020505/10
Mobile: +254 (0) 728 - 669000
(0) 736 - 424440

BOARD OF POSTGRADUATE STUDIES

4th June, 2024

National Commission for Science and Technology,
P.O. BOX 30623-00100,
Nairobi.

Dear Sir/Madam,

RE: RECOMMENDATION FOR PETER NJAU GATIMU – MBADIST221121 TO CONDUCT RESEARCH

This letter confirms the above-named person is a student in the Master of Business Administration Program at St. Paul's University.

The second year consists of a major research work leading to a Thesis. The student's selected topic is:

"Financial innovation and financial performance of Deposit-Taking Saccos In North Rift Region, Kenya."

Kindly grant this student the required permit.

Yours Faithfully

DIRECTOR BOARD OF POSTGRADUATE STUDIES
ST. PAUL'S UNIVERSITY
04 JUN 2024
P.O. BOX 30623 - 00100 NAIROBI
PRIVATE BAG - 00217, LIMURU

Dr. John Muhoho
Director Board of Postgraduate Studies

APPENDIX VIII: NACOSTI PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 295587

Date of Issue: 21/June/2024

RESEARCH LICENSE



This is to Certify that Mr.. Peter Gatimu of St. Paul's University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Bungoma, Elgeyo-Marakwet, Nandi, Turkana, Uasin-Gishu, Westpokot on the topic: FINANCIAL INNOVATION AND FINANCIAL PERFORMANCE OF DEPOSIT-TAKING SACCOS IN NORTH RIFT REGION, KENYA for the period ending : 21/June/2025.

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APPENDIX IX: PLAGIARISM REPORT

Peter Gatimu. Disseration 2024 CLEAN COPY.doc

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