FINANCIAL INNOVATIONS ON FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN MERU COUNTY, KENYA

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DECLARATION

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

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DEDICATION

To my husband, Mr. Kenneth Munene Mbae, and my daughter Karimi Munene, you have been a great source of motivation, inspiration, encouragement, and support throughout the study process, and I dedicate this project to you.

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ABSTRACT

There is more to innovation than commercializing ideas and inventions. What is labeled as an innovation may have little or no novelty in practice but slight change in the use or application of the innovation. This study explored the area of innovation and performance of SACCOs in Meru County guided by the following objectives: To determine the effect of process innovation on financial performance of SACCOs in Meru County; to establish how product innovation affects financial performance; evaluate institutional innovation and financial performance of SACCOs in Meru County. The study was anchored on Schumpeter's innovation theory; Task Technology fit theory, and Theory of Induced Institutional innovation. The study was conducted using a descriptive survey research approach. The target population of 162 respondents was drawn from the 18 SACCOs licensed by SASRA to operate in Meru County. It comprised staff from the marketing, credit, accounting, customer service department and the management. The population was divided into strata, and random samples were taken from each stratum to ensure adequate representation of all classes of employees and reduce the probability of respondent biases. Questionnaires were administered to the sampled respondents, and statistical analysis was conducted using the Statistical Package for Social Sciences (SPSS) to compute descriptive statistics and regression analysis. The Model summary of the regression analysis showed that all the independent variables accounted for 51.3% of the variance of Sacco's performance. Process, Product, and institution innovation had a positive correlation with financial performance of SACCOs in Meru County. According to the study, SACCOs should reconsider how innovative their organization is by placing a higher priority on investing in self-service digital channels than on spending money to open new branches. As a result, they will be able to take advantage of the opportunities offered by digitization.

LIST OF ABBREVIATIONS

ANOVA:	Analysis of Variance
ATMs:	Automated Teller Machines
CBK:	Central Bank of Kenya
DTS:	Deposit Taking Saccos
FINTECH:	Financial Technology
KUSCCO:	Kenya Union of Savings and Credit Co-operatives
OECD:	Organization for Economic Co-operation and Development
ROA:	Return on Asset
ROE:	Return on Equity
SACCOs:	Savings and Credit Co-operative Societies
SASRA:	SACCOs Societies Regulatory Authority
SPSS:	Statistical Package for Social Sciences
TTF:	Task Technology Fit
WOCCU:	World Council of Credit Unions

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

A co-operative society is a voluntary group of individuals who use a jointly owned and democratically controlled enterprise to meet their common economic, cultural, and aspirational objectives. Co-operative societies were established to eliminate intermediaries and pool scarce resources to achieve a common purpose. Seven ideologies govern co-operatives for the benefit and interests of the communities: voluntary and open association, freedom to choose members, profit-making ventures, contributions, autonomy and independence, knowledge, tutoring, and information (ICA, 2018).

Deposits made by members provide the main source of funding for SACCOs. They offer credit at a lower interest rate than other financial institutions, like commercial banks, do. So, they accomplish a crucial task in the development of our nation (Muteke, 2015). These savings are essential for investments because they provide the initial funding for small and medium-sized businesses, increase household income, and support livelihoods. This has a significant impact on the circular flow of income, which in turn stimulates the nation's production, income, and spending (Ayiekoh, 2013).

Savings and Credit Co-operative Society (SACCO) was pioneered in South Germany. It all began when Raiffeisen founded a charitable organization to assist people facing economic hardship as a result of famine. He was the mayor of Heddesdorf, a manufacturing town and in 1862, the charitable organization became a credit society where members' deposits served to provide loans for other members (McKillop & Wilson, 2011). In England, SACCOs began in

1850 when workers in a factory casually started to save and borrow from each other while In Spain, the Mondragon Co-operative was founded in 1943 by a Catholic priest who helped underprivileged youths to start off small ventures and it later spurred the establishment to a SACCO (Marcuse, 2015).

In Africa, English-speaking nations such as Uganda, Nigeria, Tanzania, and Kenya were the first to adopt the SACCOs movement and started gaining popularity in 1960s in other non-English speaking nations in Africa (Bwana & Mwakujonga, 2013). SACCO formation spread widely in Africa, to the point where African countries formed a continental alliance of SACCOs known as the Africa Confederation of Cooperative Society Savings and Credit Association (ACCOSSCA), with the principal objective of promoting economic growth in Africa (WOCCU, 2011).

The first Co-operative Society in Kenya was established in 1908 by European farmers to encourage agricultural activities and products in order to capitalize on the economies of scale and improve profitability (Gamba & Komo, 2012). SACCOs in Kenya provide low-income earners with the financial inclusion they need to drive socio-economic progress and the institution is considered as one of the country's economic cornerstones. Nevertheless, the diverse geographical setting of SACCO's offers a broad spectrum that focuses on members of different financial backgrounds and regions, thus encouraging distributed development (Ndung'u, 2010).

SACCOs in Kenya are categorized as either Deposit-taking or non-deposit-taking. The non-deposit-taking associations include SACCOs whose sole activity is to mobilize non-withdrawable deposits for the purpose of lending to their members. Their deposits are not withdrawable but may be used as collateral for lending to the member and are only refunded upon the termination of such membership (SASRA, 2017). Kenya's Sacco industry is one of the

largest in Africa, accounting for 5.7 percent of total assets to GDP, followed by Rwanda and Ethiopia, which account for 3.0 percent and 0.7 percent, respectively (IMF, 2020). The rapid adoption of technology and advances in the supply of financial services and products, together with the opening of the common membership bond, has aided the growth of the Sacco's business.

There are approximately 117 SACCOs in Meru as documented by the Meru County Cooperative Task force report (2016) spread across key sectors of the economy. The majority of the SACCOs are agriculturally based that belong to the tea, coffee, and dairy farmers. Farmers depend on SACCOs for credit and payment services to be able to buy, sell and distribute their farm inputs. Other groups are in finance, health and transportation sector, comprising of teachers, hospital staff, university employees and other entrepreneurs (ICA Report, 2013). Different groups pool together to save and get financing for school fees, provide investment opportunities, offer housing solutions and pay off hospital bills.

Sessional Paper No. 6, "Co-operatives in a Liberalized Economic Environment," published in 1997", the Kenyan government evaluated its commitment to the management of co-operatives. In a competitive economic context, the Sessional Paper outlined mechanisms for SACCOs to survive and succeed. In 2004, some adjustments were made to the Cooperative Societies Act no.12, 1997, to instill some control in the sector. Furthermore, the improved legal and regulatory environment has aided the growth of the SACCO industry, which now serves 28.4 percent of the adult population, the highest in Africa as of December 2019. Although 81% of the inhabitants in Kenya depend on SACCOs to access financial services, there is a decline of SACCOs as financial service providers (Ngure, Kimani & Kariuki, 2017).

The concept of innovation has become more complex and advanced over the years. Joseph Schumpeter was the first prominent scholar to explore the subject matter (1912). He stated that innovation encompasses the complete process, beginning with a kernel of an idea or a concept and progressing through all stages to a marketable product that alters the economy. Firms develop new things or new-age strategies to improve their operations through innovations, in which the new things could be established through new ways (Nyaga, 2012).

In money-related organizations or industries, innovation is viewed as the show of making and advancing new budgetary instruments, advances, foundations, and markets inclined to access information, trading, and investment strategies. Therefore, innovation is not just creating something new from beginning to the end, but it is the ability to swiftly embrace external changes and build innovations that help the organizations be at a competitive advantage (Carayannis, Samara, & Bakouros, 2015). However, the innovation process also differs with the amounts of inputs devoted by firms, simply it does not imply that adding more resources to the innovation process will ensure success since the process of producing innovation is complex and fraught with risks.

The Kenyan financial sector has faced tremendous dynamism over time. A lot of changes have been adopted in the area and prompted the expansion of money-related items, implementations, and hierarchical structures that have improved and expanded the productivity of the monetary framework. These advances in innovation and changing financial conditions have necessitated this change (Gorton and Metrick, 2010). Nevertheless, financial innovation has dramatically affected the financial market in various ways by opening and extending new markets due to new products and providing significant opportunities for stakeholders. Therefore, for SACCOs to survive these turbulences, they must align to the new approaches by adapting to financial

innovations to foster their growth, prosperity, and transformation as the environment within and outside the organization changes. Financial innovations facilitate straightforward access to monetary activities such as payouts, refunds, settlements, deposits, withdrawals, and money transfers, reducing the chances of oversights and inaccuracies (Mugane, 2015).

Financial innovations are grouped as either process, product, or institution. Process innovation is the development of innovative business processes that contribute to enhanced efficiency and market expansion which decreases unit costs of production and delivery of new or significantly improved products (Frame & White, 2002). Process innovations include adoption of Automated Teller Machines, Online payment services such as (Safaricom Mpesa and Airtel Money platforms), connectivity and use of ICT in provision of services, office automation and use of reliable accounting and client data management software (Ngure et al., 2017).

Product innovations introduces a new or significantly enhanced good or services in terms of its attributes or intended usage (OECD Oslo Manual, 2018). Financial product innovations might be based on new applications or a blend of current information or procedures, or they can be based on new knowledge or techniques. It is the adoption of new or updated financial services such as deposit accounts, credit cards, debit cards, leasing. Organizations must adapt or respond to increased global competition, fast changing customer needs, technology improvements, and shorter product life cycles by introducing new items to the market (Ahoya, 2015). For firms to survive then the development of new products and modification of existing products is very important, and the rule is no exception to small and medium-sized companies as well. Entrepreneurs must embrace product innovations in order to respond to changes in market demand or to improve organization efficiency (Maulana, 2016).

Research on Institution innovation has used different concepts to analyze the impact of innovation on performance. Innovation Strategies shape how an organization perceives the environment, set its goals, allocates resources, structures the value creation process and strengthens organizational as well as dynamic capabilities (Broom, 2013). As a result, through influencing the organization, the organizational orientation has an impact on strategy creation and implementation. It includes new or reformed business practices in terms of how roles and decision making among employees are assigned more so, how the organization is structured to carry out its business with both the internal and external customers (Fay et al., 2015). Entrepreneurial orientation literature suggests that innovation strategic planning orientation increases performance, especially in situations of resource scarcity, market-entry, and when facing established and more resourceful competitors. Therefore, institution innovation must be heavily emphasized as other forms of technological innovation in an organization (Rubera & Kirca, 2012).

When companies spend much money on research and new technology for product innovation, their financial performance declines since the benefits of launching new items are only realized after customers have used and adopted them (Anthony & Susan, 2017). Financial performance may include but is not limited to increasing sales rate, market expansion, productivity, and profitability. The success of a company's performance in terms of return on investment, return on assets, and value-added, among other metrics, is represented in its financial performance; therefore, profitability is the main objective of SACCOs since it determines the dividend payouts for its members (Wyman, 2012). Return on Asset (ROA), Return on Equity (ROE), and Net Interest Margin are some of the most common ratios used to assess a company's profitability. (Murthy & Mouritsen, 2011).

The main measures in observing parameters of growth and performance of SACCOs include deposits, loans, member share capital, reserves, and membership. Kenya's SACCOs have quickly grown and are among the largest in Africa. According to the SASRA report for 2019/2020, the Kenyan Deposit Taking (DT-SACCO) segment recorded total assets of Ksh 677.7 billion, up from Ksh556.7 billion a year, while Gross loans stood at Ksh 474.8 billion compared to Ksh 419.6 billion in 2019, a growth of 13.2%. Additionally, Total deposits held by the deposit taking SACCOs stood at Sh431.545 billion in 2020, a 13.4% improvement on the Sh380 billion recorded in 2019. However, a global survey by McKinsey (2015) showed that to feel the impact and realize the full range and potential of new forms of digital finance, a much wider variety of players than SACCOs and banks must be involved. These players include telecoms companies, payment providers, financial technology start-ups, microfinance institutions (MFIs), retailers, and other companies (Mugo and Kilonzo, 2016).

The efficiency with which a company's resources are used to achieve its objectives is reflected on how well it performs and its use of financial indicators to assess the degree to which those goals are met (Ahmed et al.., 2011). A firm's financial performance results from achieving both internal and external goals of a firm, and as a multidimensional construct, it bears several names, including growth, survival, success, and competitiveness. The impact of innovation on company success cannot be explained in isolation or from a single perspective. Some financial viewpoints suggest that innovations are risky strategies for firms (Fernandes & Paunov, 2015). As soon as a company launches a new product, it must face and overcome technical obstacles, market competition, and aggressive sales methods from competitors. However, when organizations engage in innovation, they face issues such as a considerable increase in the cost of goods, which can impair their profitability and planned shareholder returns. On the other hand, Firms can improve their market position, acquire a competitive edge, and increase productivity by

implementing innovative ideas. In addition, according to Dary and Issahaku (2013), innovation can boost consumer satisfaction and loyalty. As a result, customers will purchase products regularly and recommend them to their friends, resulting in increased revenue and profitability.

Almost every industry is experiencing unprecedented disruption and performance pressure. Many leaders encourage their organizations to innovate quickly to stay ahead of the curve, but they tend to focus on narrowly defined technological and product innovation. Frame and Lawrence (2001) observed that in a financial system, the formation of an institutional innovation encounters many challenges and is often met with resistance, resentment, and struggle for control due to the dynamic tensions between innovative and institutional changes: Two Social forces always collide when innovations meet institutions, one accounts for the strength of social systems, while the other accounts for change (Hargadon & Douglas, 2001). but when organizations can understand its customers' needs as well as the competitor's actions then innovations can be a basis for competitive advantage and will stop struggling to keep up with the rate of development in infrastructure and consumer behaviours. Thus, the process of development of innovation needs to be managed diligently to increase performance (Howell, Shea, & Higgins, 2005; Wolff, 2007).

Dedicating substantial resources to innovation does not guarantee achievements if firms cannot make them into helpful innovation offerings since resources may be misused and lead to firm losses. Because of their limited resources, SACCOs are affected by poor innovation process management that results in resource waste. However, Sacco's existence and development can also be threatened if they cannot make a good return on huge investments devoted to innovation tasks (Saleem & Abideen, 2017).

1.2 Statement of the Problem

SACCOs operate in a competitive environment and are always at a disadvantage due to their lack of sustainable financial innovation foundation (Tsuma, Maniangi, Odhiambo, & Musinga, 2015). Due to changes in the industry, the situation got worse over time. Highly sophisticated financial institutions that offer new payment and asset options have flooded the financial sector industry (Blythin & Cooten, 2017). The mobile digital credit revolution in Kenya has attracted numerous financial technology (FINTECH) companies that are promoting financial inclusion outside of traditional banking or financial uses, which marks the entry of new players into the market (World Bank, 2018). These businesses provide a range of technologies to assess a customer's creditworthiness via mobile devices, meet specific needs regardless of location, and provide opportunities to Kenyans who were previously financially unable to access financial services. Due to these new competitors and competition from other financial institutions, the productivity of SACCOs has gradually decreased because the majority of SACCOs are unable to compete successfully (Makori, 2013).

SACCOs in Meru County are using digital systems to streamline their operations, but they are still relying on manual processes in many areas of their business and keeping records in a traditional way, necessitating the development of creative and innovative approaches to sustainability (Miriti, 2014). Research on SACCO innovations have been done locally, according to an analysis of pertinent literature. But because of the issue of slow growth, SACCO membership has decreased as a result of inadequate adjustments to meet members' various credit needs and slow service as a result of protracted decision-making procedures (SASRA, 2018). The fact that only 18 SACCOs have been registered and granted operating licenses by (SASRA, 2020) as opposed to a total of 117 operating SACCOs registered at the Meru County Co-operative office underscores the uncertainty regarding the level of innovation displayed by Meru

County SACCOs in operating their businesses. There are, however, only a few thorough studies that show how financial innovations were adopted and how this might be related to the financial performance of the SACCOs in Meru. The study therefore intends to fill this research gap by establishing how financial performance of SACCOs in Meru County is influenced by the application of these innovations in their service delivery.

1.3 Study Objectives

The study was to address the general objective and 3 the specific objectives.

1.3.1 General Objective

To investigate the effect of financial innovations on financial performance of SACCOs in Meru County in Kenya.

1.3.2 Specific Objective

i. To determine the effect of process innovations on financial performance of SACCOs in Meru County.
ii. To establish the effect of product innovations on financial performance of SACCOs in Meru County.
iii. To evaluate effects of institutional innovations on financial performance of SACCOs in Meru County

1.4 Research Hypotheses

i. H_{01}: There is no significant relationship between process innovations and the financial performance of SACCOs in Meru County.
ii. H_{02}: There is no significant relationship between product innovations and the financial performance of SACCOs in Meru County.

iii. H_{03}: There is no significant relationship between institutional innovations and the financial performance of SACCOs in Meru County.

1.5 Significance of the Study

The study is anticipated to provide insightful data on regulation to assist in the development of efficient policy for the SACCO sector. The study will also serve as a benchmark to assess their level of financial innovation and pinpoint areas that require improvement. SACCO members will gain from this as they will have access to more cutting-edge goods and services that improve the sector's effectiveness and efficiency.

The study will give financiers and investors the opportunity to reconsider their investment choices in light of the new SACCO institutions, procedures, and products. Knowing what kind of assistance, the industry requires to foster growth that ensures seamless sector success will be beneficial to the government and its agencies.

Scholars will also gain from the body of knowledge already in existence, draw attention to inconsistencies in the research on financial innovation and performance, and identify new areas for future research in the area of financial markets and institutions.

1.6 Limitations and Delimitation (Scope) of the Study.

The aim of the study was to determine the effect of financial innovations on financial performance in the five-year period 2015-2019. The study focused on the 18 registered and licensed SACCOs approved by SASRA to operate in Meru County. Members from the 18 SACCOs come from all sectors of the economy across the country. The findings of the study will therefore reflect well on other SACCOs in the country.

One of the challenges the researchers faced in data collection process was the reluctance of some respondents to disclose financial information, which they emphasized as confidential. But the researcher assured them that the information was for academic purposes only and that they did not have to identify themselves in the questionnaire. Both open and closed-ended questionnaires were used in the study in order to maximize the information required from the respondents to achieve the research objectives.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter summarizes existing literature on financial innovations and performance, as well as the impact they have. It provides an overview of previous work on related topics, providing the necessary context for this research.

2.2 Theoretical Literature Review

The study was guided by the following theories to explain the effect of financial innovation and performance: Schumpeter's Theory of Innovation, Task Technology Fit Theory of Innovation and Theory of Induced Institutional Innovation.

2.2.1 Schumpeter's Theory of Innovation.

Schumpeter (1928) pioneered the theory of innovation, in which he describes how businesses can become autonomous innovators and create new profit prospects through innovation. He believed that an entrepreneur could earn economic profits by introducing successful innovations and the rewards come in the form of profits given for his performance. According to Schumpeter, innovation is any new policy adopted by an entrepreneur in order to lower overall production costs or raise demand for his products.

He described innovation as a five-stage process: The introduction of a new product to the market, which would usher in changes to an entity's activities, was the first step in the launch of a new product. The deployment of new advertising, marketing, and promotion strategies to create awareness of the product was the second step. The third phase required the developer to introduce the product to a new market segment such as different financial institutions or the agricultural sector. The fourth step entailed streamlining the manufacturing process. This process was accomplished by acquiring additional raw materials for production, including semi-finished

components, or automating operations to speed up the transfer of the invention. The final step was to establish a body or organization to oversee the supply of innovative services including but not limited to installation maintenance, research, and development groups to help with product development.

According to the innovation hypothesis, the Sacco's can benefit if their innovations cut the overall cost of production or raise demand for their products, but the profits are only temporary as competitors duplicate the idea; thereby, the innovation ceases being new or novice. However, SACCOs can achieve this by hiring financial analysts and cost accountants, establish research and development departments to assess changes in market trends, according to Schumpeter (1912).

Porter (1992) backed up Schumpeter's statements, stated that most country's long-term economic growth and competitive advantage rely on innovation. He argues that to compete effectively in international markets, a nation's businesses must continuously innovate and upgrade their competitive advantages. Continuous investment in both tangible and intangible assets results in innovation and upgrading. Financial markets play critical roles in mobilizing savings, evaluating projects, managing risk, monitoring managers, and facilitating transactions. This theory is very important to the study because SACCOs ought to be competitive in the ever-changing financial institution's dynamics so as not to be extinct from the industry.

2.2.2 Task Technology Fit Theory

Goodhue & Thompson (1995) pioneered the task-technology fit (TTF) theory. They resolved task-technology fit (TTF) as a technology that assists an individual in performing his or her tasks specifically, being fit among task requirements, individual abilities, functionality, and interface

of the technology. The task-technology fit model is categorized into four main components, Technology features, Task features and Task-Technology Fit, which later influences the outcome variable of usage and individual or company performance. TTF models hypothesize that Information Technology (IT) will be useful and appropriate only when the IT function is relevant to the user's job functions and organization's processes. Therefore, for an information system to positively impact an individual's performance; the technology used should be a good match for the tasks it is supposed to help with. (Muthui, 2013).

SACCO's operational efficiency is linked to a variety of factors, including operational cost-effectiveness, profitability, and customer service. These technological advances embodied in process innovation improve productive efficiency by reducing average total costs (Therrien et al., 2011) Therefore, the Information systems modeled should be able to assist users to carry out tasks more efficiently and competently. The model was used to explain why SACCOs need to embrace technology in their daily operations to cut on cost, improve on their process delivery in order to serve customers effectively and sufficiently and aim at attaining efficiency and increasing their customer base. Nevertheless, information systems will not only add value but also improve performance (Wyman, 2012). The theory of task-technology fit upholds that a match between business tasks and information technology is paramount in predicting the success of information systems used by an organization. For various scenarios of task and technology, statistical significance was established to have a positive association between task-technology fit and information system success measures in comparison to the impact on individual performance and on group performance.

2.2.3 Theory of Induced Institutional Innovation

Vernon & Hayami (1984) proposed the theory of induced institutional innovation, arguing that shifts in demand for institutional innovation are triggered by changes in relative resource endowments and technological change. These technological innovations save money on relatively scarce inputs that are invented adopted. The induced institutional innovation model shows that when these four elements, resource endowments, cultural endowments, technology, and institutions, map the general equilibrium. However, the relationship among these variables must also be characterized by recurrence.

Whether economic, political, or cultural, institutions emerge and evolve as a product of social interactions. At times, institutions result from deliberate initiatives, whereas, on other occasions, they arise by accident, unintended byproducts of behaviors that become routine over time. SACCOs as an institution are rooted in the cultures, technologies, and infrastructures of their time, and the emergence of any new social or technological infrastructure often accelerates fundamental institutional innovations. The theory, therefore, explains why SACCOs, as a social and economic institution, must be willing to change their culture and embrace innovation.

SACCOS will achieve its aim of developing wiser institutions that can succeed in a world of dynamic growth if they embrace a new logic of evolutionary learning through continuous innovations. SACCOs can create research and development departments thereby increasing understanding, compliance, and downstream product and process innovations enabling interactions and relationships. It is also an opportunity to break away from the conventional performance trade-offs and move from a business environment of declining returns to one that promotes profitability. SACCOs must also have requisite resources and financially allow their organization to re-engineer, scale, learn, and simply create stable and successful innovations

breakthroughs at all levels in branding, business strategies and management systems, which leads to not only growth but also better performance.

2.3 Empirical Literature Review

Financial innovations refer to the creation of new goods, the establishment of new institutions, the adoption of modern technologies, and other features of the financial markets that are novel (Schumpeter, 2008). Financial innovation, which is embedded in a firm's organization structure, operations, products, and services, is frequently regarded as an essential component of competitiveness (Mosongo, 2013). Financial innovation strategic decision-making, system realignment, institutional setup, bringing in new management, and expanding into new markets. Financial innovation promotes information transmission and incorporation into financial market values faster (Mosongo, 2013). However, collaboration with external partners in innovation projects implies significant complexities concerning coordination efforts, protection of intellectual property, and or appropriation of rents (Haliassos, 2013).

SACCOs might also lack the experience needed to manage external collaborations and are expected to suffer from the dominance of external innovation partners, primarily if they depend on crucial partners in their key development projects, their external network partners might dictate the direction of the development projects, the resources they need to commit, and the terms of how potential benefits are split. As such, the small firms might suffer from the liability of smallness in competitive markets (Porter, 1998). However, external collaboration can provide benefits; it also implies direct and opportunity costs, reduced complexities, allows expertise development and permits a complete appropriation of innovation returns.

Empirical studies indicate that the relationship between innovation and performance conclusively exhibits mixed findings. Isogawa (2013) reported that innovation does not influence firm performance because of cannibalism effect which occurs due to the rigorous competition in the market saturated by homogenous products. Innovative activities can allow innovators to make monopoly profits according to Schumpeter 1979; Lieberman & Montgomery (2010). Numerous studies have confirmed the positive relationship between innovation and business performance. However, firm-level profits may not follow the same pattern (Artz et al. 2010) as initially high revenues from new products are due to increasing competition, more market participants, strategy defensiveness of incumbents and declining market share. For this reason, the relationship between innovation and performance is mixed and inconclusive. Furthermore, large established firms were reviewed, and this mixed finding was grounded on unplanned narrative reviews and studies.

The association between innovation and productivity, a positive effect of innovation on productivity, is witnessed in developed and developing countries. Crépon, Duguet, and Mairessec (1998) Model was used to analyze firms data level from France and found that innovation positively impacts productivity growth. French manufacturing innovators, in particular, had higher productivity gains after innovation than their non-innovating counterparts. Research carried out by (Ndubisi and Iftikhar, 2012; Al-bahussin and El-garaihy, 2013; Bigliardi, 2013) indicate that innovation has a direct correlation to firm performance however, not all categories of innovation reflect the same impact. Nguyen *et al.* (2016) in his study found out only product innovation had a direct effect on firms' financial performance.

Ndwiga and Maina (2018) ascertained that process innovation had a significant and positive relationship with financial performance while product innovation was insignificant. The study

was on financial innovation and financial performance of listed commercial banks in Kenya. Secondary data were acquired utilizing a datasheet from annual reports from 2009 to 2016 and a cross-sectional survey study design. The data of the post-global financial crisis were analyzed by use of multiple linear regressions. The study established that commercial banks transformed their products and processes, though this was not fully accomplished. New debit cards, credit cards, loan accounts, and savings accounts were among the products introduced, while process innovation included mobile banking, online banking, and agency banking. The study concluded that only process costing had a significant positive relationship while product innovation showed no significant relationship and recommended that to ensure that banks remain financially viable, process innovation would cut operational costs, and unproductive products would need to be phased out.

Njenga, Kiragu, and Opiyo (2015) conducted a study on the influence of financial innovations on the financial performance of SACCOs in Nyeri County, Kenya. 30 SACCOs were reviewed, the study employed a cross-sectional survey research design with stratified sampling. Data was collected using a semi-structured questionnaire, and descriptive statistical analysis were formed to describe the study objectives and respondents' attributes. To determine the convergence of the responses, measures of variation were used. Inferential statistics, such as model fitness (R2) for testing the null hypothesis, ANOVA, and regression coefficients, were used to conclude a significant relationship between financial innovations and financial performance. Additionally, telephone banking and internet banking were the significant determines in driving the SACCOs financial performance.

Ngure (2017) carried out a study on financial innovations and the performance of savings and credit co-operatives societies in Kirinyaga County, Kenya. He applied a cross-sectional

descriptive survey research design and self-administered questionnaires for primary data and audited financial statements were used to obtain secondary data. The results showed a positive relationship between financial innovations and the financial performance of SACCOs in Kirinyaga County. The investigated innovations included product innovations, process innovations, and institutional innovations. However, whether these financial innovations have a similar influence on SACCOs in Meru County is not clear.

Musiega (2015) studied the effects of financial innovations on the financial performance of Kakamega Teachers Co-operative Society Limited. Primary data and descriptive research design were employed, while transaction cost innovation theory was used to determine the relationship of variables. The research findings revealed a positive correlation between process innovations and financial performance. This entailed automation, computerization, and the use of ATMs. Financial performance measurement was based on dividend per share and profitability of the SACCO. Given that the research evaluated a single SACCO, its generalization to other SACCOs in the country may be limited.

In Nairobi County, Kenya, Ouma, Omagwa, and Ngaba (2018) investigated the impact of financial innovation on Deposit-Taking SACCOs (DTS) performance. The authors claimed SACCOs in Kenya need to reserve huge investments for innovations and human resources training. However, it is unclear whether DTS's financial performance has been considerably impacted by the implementation of financial innovations. The study established that new products and service processes had a considerable effect on financial performance. At the same time, liquidity and profitability were insignificantly affected by the formation of new organizations but significantly affected by capital adequacy. It was also established that a firm's

characteristics affect the relationship between financial innovation and performance was significantly affected by a firm's characteristics.

Nyambariga (2013) investigated the impact of financial innovation and discovered a positive and significant relationship between service innovation, organizational innovation, and ROA on the financial performance of Kenyan commercial banks. The study used a cross-sectional research design. Muteke (2015) investigated the correlation between financial innovation and financial performance of Mombasa County savings and credit co-operative societies in Kenya. According to Muteke (2015), some institutions employ fundamental financial innovation techniques such as risk management, risk pooling, swapping and splitting income streams, and converting long-term to short-term obligations. The findings revealed that financial innovation and the financial performance of Mombasa County's SACCOs had a positive association. Product innovation was shown to be the most influential variable, followed by process innovation and institutional innovation, which is a significant determinant of Sacco's performance and provides further understanding of the indirect contribution of the many aspects of innovation strategies.

Shejero (2016) investigated the impact of innovation strategies on competitive advantage among Mombasa County savings and credit co-operative societies in Kenya. A semi-structured questionnaire was used to obtain primary data. Among the main issues influencing innovation adoption as a strategy for achieving competitive advantage, according to the study, are the need to improve cost-saving initiatives and expand product range. The findings revealed that the costs of innovation are excessively high, and SACCOs in Mombasa County primarily used product innovation.

Macharia and Tirimba (2018) evaluated the impact of product innovation factors on financial performance of 30 DT-SACCOs in Nairobi City County, Kenya for a five-year period from 2013 to 2017. The study results showed that innovation factors aspects had a significant relationship with financial performance.

Maleto (2012) examined the effects of financial innovation on the expansion of Kenyan savings and credit cooperatives. He argued that SACCOs operate in a dynamic and multifaceted environment, and there is an evident force that contributes to closure and decline in growth for those that survive. This is attributed to various challenges such as lack of qualified staff, a competitive environment, economic liberalization, and regulation of businesses as some of the challenges which are unique and identifiable to the industry in general. Adopting descriptive research design in the study established that the value transacted using ATM, mobile banking, internet banking, and electronic record-keeping positively and significantly affected the growth of SACCOs in Kenya.

Ngugi and Karina (2013) investigated the effect of product innovation on Kenyan SACCO's performance. They discovered that establishing a product mix for the SACCO was only possible if SACCOs adopted innovative strategies such as product substitution, product repositioning and full compliance to a variety of products that add value and play a role to the SACCO's profitability. They concluded that the adoption of product innovations that would create a wide range of SACCO credit products would increase SACCO's profits through access to credit. However, research focused on product innovation in SACCOs at the cost of the performance.

Sum and Memba (2016) sought to establish the effect of financial innovation on the financial performance of DTS in Kiambu County, Kenya. The study's independent variables were product

innovation, process innovation, service innovation, and institutional innovation. At the same time, financial performance was the dependent variable, with RAO, liquidity ratio, core capital to total assets, and non-performing loans to total gross loans as its parameters. Data was gathered via a questionnaire. According to the regression model, financial innovation has a tangible link with financial performance. The study recommended that SACCOs embrace various financial innovations to improve their financial performance, as all sorts of financial innovations have been shown to improve financial performance. The study did not explain how the sample size and theory anchoring to the study variables were determined. However, the study specifically scrutinized the role of product, process, service, and institutional innovations in the performance of SACCOs.

Githakwa (2011) investigated the association between financial innovation and commercial bank profitability in Kenya. The study's goal was to determine how financial innovation affects commercial bank profitability in Kenya. The population for the study was all the 44 registered commercial banks in Kenya. The study was conducted using questionnaires and secondary data from commercial banks' websites, publications, and CBK. Statistics were collected from 40 commercial banks, which responded to the questionnaires. He concluded that Kenya commercial banks conceptualize financial innovation to create an impact on profit performance. Implementing financial performance makes commercial banks save great resources, reduce operations costs, reduce cost per transaction in bank operations, and satisfy their customers.

Moki et al. (2019) conducted a study in Nairobi County on DT-SACCOs' financial innovation approach and financial performance. Open systems, financial intermediation, life cycle saving theories were used in the study. The study included a descriptive research design and a causal research design. A total of forty registered DT-SACCOs in Nairobi County were the target

population. The study established a significant relationship between financial innovation and financial performance. Firms that did not implement financial innovation were bound to be delicensed due to their financial unsustainability. However, the study failed to mention those who responded to the issued questionnaires.

Ringera (2018) did a study on financial innovation's effects on efficiency of SACCOs in Meru County and established that there are weak positive but statistically significant relationships between Mobile banking and SACCO's efficiency and between Internet banking and SACCO's efficiency. Muteke (2015) also did a study on the relationship between financial innovation and financial performance in Mombasa County and his findings were similar to Onduko (2013) who did a study in Nairobi County and observed that there is a positive relationship between financial innovation and financial performance. However, the results differed from Mombasa County's, where product innovation had more effect than institutional innovation.

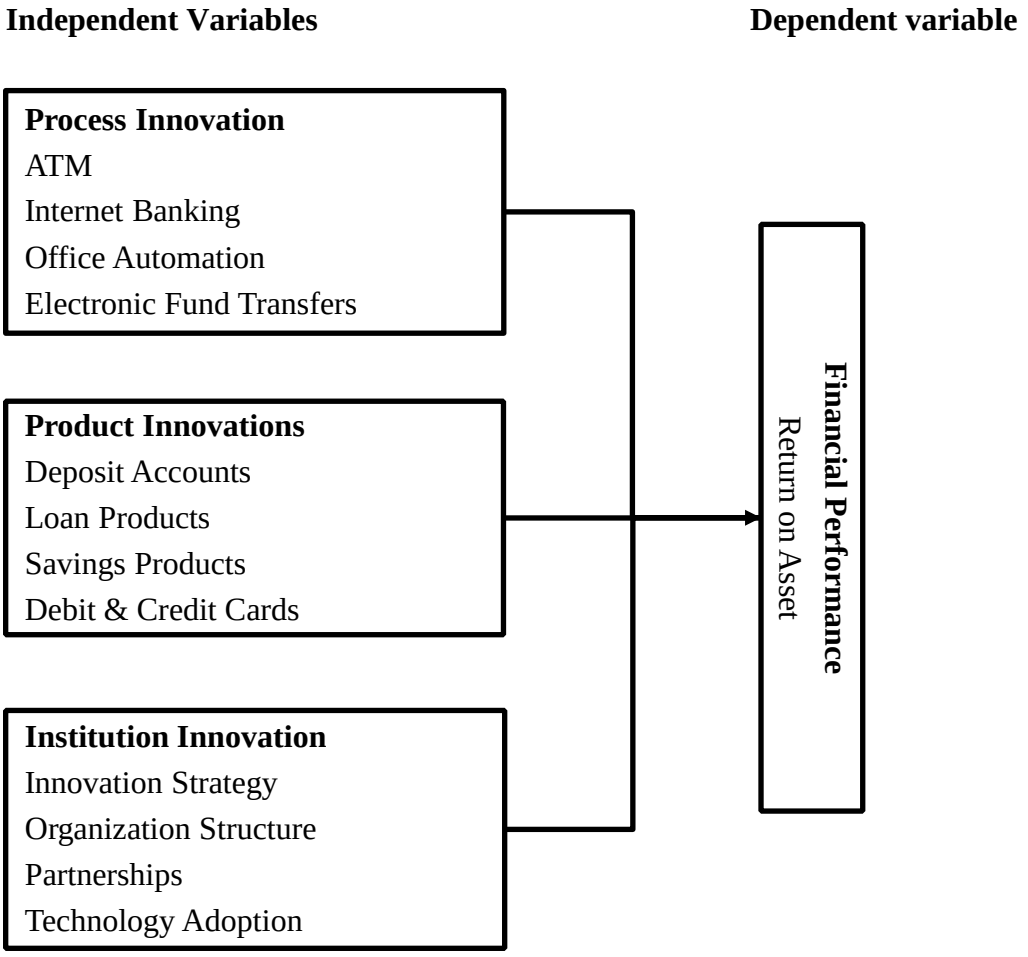
In general, innovation has a direct impact on firm performance, but a study by Nguyen et al. (2016) on product, service, organization and marketing innovation on firm performance revealed that only product innovation has a positive correlation with the company's financial performance. Agency. However, the empirical research that has tested the relationship between institutional innovation and performance has not always confirmed this theoretical proposition. Research results are conflicting. A study by Gunday et al. (2011) found that organizational innovation has a statistically significant relationship with firm performance, while the study by Zaied and Affes, 2016) revealed that organizational innovation does not have a significant relationship with the company's financial performance.

Empirical evidence sometimes points out the negative effect of firm performance and innovation on the potential uncertainties arising from the company's changes up until innovation is a success and reaches its full exploitation (Foster, 2010). Subsequently, other empirical studies justify the positive effect of innovation by examining the impact of different innovation typologies. Based on a review of relevant literature, it is evident that innovation research has been conducted locally and as well as internationally. The research is also based on different datasets from various countries, and the investigations have not reached a consensus. This study will seek to fill these gaps in SACCOs' financial innovation and financial performance in Meru County.

2.4 Conceptual Framework

A conceptual framework is a diagrammatic framework that shows the relationship between study variables as shown in figure 2.1. Independent variables are process innovation, product innovation and institutional innovation, while financial performance is the dependent variable.

Figure 2.1: Conceptual Framework



Source: Researcher 2021

2.4.1 Process Innovation and Financial Performance of SACCOs

The internet has developed into a vital tool for business growth, and its applications and usage affect internal firm characteristics like innovation, business model, performance, and productivity (Kaumba, 2019). In the formal and informal banking markets, 78 % of ATM usage has led to an increase in savings and membership signups (FSD, 2017). SACCO members are able to use an ATM to obtain information and services, including the ability to deposit money or withdraw it, check their account balance, and make deposit statement requests. These has enabled SACCOs to overcome informational challenges in the market and derive a quantified

benefit to compete and outperform their rivals, leading to better staff utilization, higher customer service standards, cost savings, easier entry into new markets, and increased transparency.

Sum and Memba (2020), who advocated for the use of ATMs in the SACCO sub-sector in their study, assert that SACCOs are now competitive because depositors are turning away from banks that not only offer ATM services but also charge high interest rates on their loan products however other studies revealed a rise in debit card and ATM fraud, which may be detrimental to the financial stability of financial institutions.

Internet banking supports management with accurate data, which is crucial to an organization's success. Internet banking provides a 24/7 access to account information from any location, at any time of day, to conduct all common operations online, such as account transfers, balance inquiries, bill payments, stop-payment requests, and some even let customers apply for loans online leading to efficiency (Kanagal, 2015). However, Nader (2011), study findings revealed that there was no such thing as improvement in profit efficiency with the availability of mobile and personal computer banking. This suggests that more focus should be on innovation as mobile banking is one of the process innovations in banks that enhance profitability.

2.4.2 Product Innovations and Performance of SACCOs

In a fast-paced, competitive business environment, companies must continuously produce products to meet the changing needs and wants of customers while meeting their sales, market share, and profitability goals. It is essential for the progress of the organization and a powerful tactical tool to dominate the market (Kimaru, 2013).

According to a study conducted in Kirinyaga County (Ngure, Kimani and Kariuki, 2017), product innovation is essential to sustain an organization's financial performance and improve

its competitive advantage. Research has found that product innovation and financial performance are positively correlated.

SASRA (2013) states that as of December 2012, 139 licensed depository SACCOs were connected to the SACCO Link system, enabling SACCO members to use their Saccolink debit cards to access various financial services. However, Ngumi (2013) found that debit cards were statistically insignificant in improving the financial performance of banks as they are associated with fraud. The limited range of loan products offered by SACCOs has hindered the uptake of loans even though they are considered cheaper and more accessible. Gaitho (2010) conducted a study on SACCO credit availability in Nairobi. The results show that the volume of loans received from a SACCO is a result of its range of loan products. However, Phyllis and Rai (2010) argue that several factors can affect credit uptake in rural areas, including poor product quality and lack of product awareness. (Muriti, 2013).

2.4.3 Institutional Innovation and Performance of SACCOs

Leadership has a critical role in supporting innovation by influencing firm strategic decisions, policies, and procedures, and they are crucial agents in encouraging changes that foster innovation within a company (Prasad & Junni, 2016). Apart from the importance of leadership for organizational innovation, the appropriate type of leadership is crucial to effectively drive innovation in an organization. Mwangi (2015) sought to establish factors influencing the performance of SACCOs in Kenya using UNAITAS SACCO as a case study. The study concluded that organizational subculture, organizational structure, leadership capacity, and rewarding practices had an active and direct role in performance. Though indirect, the study concluded that institution innovation in a firm is vital for its financial performance. Uluma (2013) assessed the determinants of growth of savings and credit co-operatives in Dagoretti

District, Kenya. The study revealed that wrangles and leadership struggle increased as additional members joined the Sacco from other different organizations. According to the report, many SACCOs are partially computerized, while others are not. Loan disbursement and recovery have both improved as a result of computerization. The study found that for technology to be fully engrained in the organization, training helps to improve adoption in the Sacco.

Inputs from the innovation process could be used to develop innovations internally or in partnership with external parties. However, the literature on the development of innovations through external cooperation suggests both good and negative consequences for small businesses when it comes to producing innovations through external collaboration. Agency banking and branch networks can be seen as a technological innovation from a supply-side perspective where each corresponding network provides a flexible and low-cost technological infrastructure to ensure access to SACCO services in a more cost-effective way than other alternatives. From a demand-side perspective, agency and branch networks represent a social achievement social innovation, giving the poor easier access to essential banking services, to the most remote locations where traditional bank branches cannot be accessed (Aduda, Kiragu and Ndwiga (2013). In contrast, other literature challenges the benefits of developing innovations through external collaborations.

Oyugi (2015) conducted a study on the relationship between agency banking and financial performance and how alternative financial delivery methods influence the performance of commercial banks in Kenya. The financial delivery methods included mobile banking, ATMs, agency banking, and internet banking. The study revealed that the adoption of these alternative methods led to an improvement in the financial performance of various commercial banks. Olando (2012) assessed financial practice as a determinant of the growth of SACCO's wealth in

Meru County, Kenya, and argued that the lack of sufficient growth of SACCOs has made it difficult for them to counter their operational deficits, these have threatened their sustainability leading to members losing their savings and share capital by absorbing all the losses. The study indicated that financial stewardship, capital structure, and funds allocation are some of the growth strategies that most SACCOs employ to build up their wealth. The study further suggested that Sacco's incomes from investments have not been sufficient in covering their cost and that SACCOs inadequately complied with their by-laws. This is, therefore, a good pointer that institutional innovations contribute to the wealth growth of SACCOs.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter shows the stages and phases that followed in completing the study. It outlines the collection, measurement, and analysis of data. The section also reports the procedures and techniques that were used in the collection, processing, and analysis of the data. Specifically, the included subsections are research design, target population, data collection instruments, data collection procedures and finally, data analysis.

3.2 Research Design

The study used a descriptive research design. This design was applicable to the study since it enabled the investigator to gather data of the variable of the study in their natural setting and allowed valid general conclusions from the facts discovered. The decision to use this design was made based on its capacity to explain relationship between variables in their natural environment and also allow a general conclusion through the administration of self-completed questionnaires (Orodho, 2002).

3.3 Scope of the Study.

This study focused on the effect financial innovation and financial performance of SACCOs in Meru County. 18 SACCOs registered and licensed by SASRA formed the scope of the study.

3.4 Target Population

A population entails a collection of items to be investigated (Mugenda, 2005). The study's population comprised of all the registered SACCOs operating in Meru as listed in Table 3.1.

Table 3.1: List of Registered SACCOs in Meru.

NAME OF THE SACCO
Capital Sacco Society Ltd
Centenary Sacco Society Ltd
Chai Sacco Society Ltd
Dhabiti Sacco Society Ltd
Golden Pillar Sacco Society Ltd
Kenya Police Sacco Society Ltd
MMH Sacco Society Ltd
Mwalimu National Sacco Society
Nexus Sacco Society Ltd
Nyambene Arimi Sacco Society Ltd
Siraji Sacco Society Ltd
Smart Champions Sacco Society Ltd
Solution Sacco Society Ltd
Southern Star Sacco Society Ltd
Times-U Sacco Society Ltd
Trans Nation Sacco Society Ltd
Unaitas Sacco Society Ltd
Yetu Sacco Society Ltd

Source: SASRA (2020)

3.5 Sampling Procedure and Sample Size

According to Kothari (2004), where a study population exceeds 100, then it should be sampled, and since the study has a large population (162), sample was drawn from the Marketing department, Tellers, loans department, Management, and customer care. The stratified random sampling technique was justified for use in this study following the scientific rules of probability; it ensured adequate representation of all classes of employees and reduced the probability of

respondent bias. This sampling method ensured proportionate participation of employees from all the required departments as shown in Table 3.2.

Table 3.2: Sampling Frame

Department	No of staff targeted	No of SACCOs	Total Population
Marketing Dept.	2	18	36
Accounts Dept.	3	18	54
Credit Dept.	2	18	36
Management	1	18	18
Customer Care	1	18	18
Total			**162**

Source: Research Data (2021)

The use of 66 respondents in the study was befitting as was in line with the recommendations of Mugenda and Mugenda (2003), whereby a descriptive study should include at least 30% of a population. The formula below was employed to determine the size of the sample as used by Nassiuma (2008).

$N=NC^2$

$C^2+ (N-1)\ e^2$

Where:

n represents sample size,

N represents the study population

C represents coefficient of variation ($21\% \leq C \leq 30\%$), and

e represents error margin ($2\% \leq e \leq 5\%$).

Calculating the sample size,

$n = 162(0.21)^2$

$0.21^2+ (162-1)0.02^2$

n = 65.85

n = 66 respondents

3.6 Research Instrument

The study used a self-administered structured questionnaire through the “drop and pick technique. The questionnaire was divided into two parts, the first part was designed to establish a background and demographic data from respondents while the second phase used structured questions on a 5 points Likert scale aimed to elicit information that could be used to test the various study hypotheses. Secondary data was obtained from annual reports published, magazines, and other available literature, including the statement of financial position and directors' reports. The Questionnaire consisted of open-ended and closed-ended questions.

3.7 Piloting

A pilot study was carried out by the researcher with 20 participants. In order to evaluate the accuracy of the instruments to be used during data collection, questionnaires were given to nine different SACCOs in Meru Town that are not listed and licensed by SASRA; the nine SACCOs were not included in the final study. The results showed that the study was feasible in the original conceptualization. The results of the pilot study showed that the respondents comprehended the questions in their original form. Additionally, it demonstrated how the descriptive research design provided answers to the research questions. The effectiveness of the pilot survey was very clear because it enabled the researcher to determine the questionnaire's content validity as well as the overall research tools and, as a result, make the necessary adjustments prior to conducting the research.

3.7.1 Reliability of Measurement Instruments

Reliability is a measure of the consistency of the research instrument (Kimberlin & Winterstein, 2008). It is often used to evaluate the test-retest reliability method. Reliability and consistency were improved by incorporating various comparable items on a measure by analyzing a diverse

sample of individuals and by using uniform testing techniques. In case there was a substantial variance observed, the research instruments were to be deemed ineffective and unreliable, but if the result were a consistent outcome on the application of the instruments, again and again, the instruments were declared as fit for the study.

3.7.2 Validity of Measuring Instruments

The validity of a questionnaire refers to the extent to which it measures what it claims to measure (Mugenda & Mugenda, 2003). In other words, validity is the degree to which results obtained from the analysis of the data represent the phenomena under study. On Content validity, the study evaluated the extent to which data is collected using only a particular research instrument depicted a specific area or domain of a given concept. Mugenda and Mugenda (2003) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field. Thus, the researcher sought the assistance of her supervisors, who, as an expert in research, helped improve the content validity of the instrument.

3.8. Data Collection Procedure

Data collection deals specifically with the category and type of data to be collected and the techniques used. The type of data collected for this study was primary and secondary data which was used to analyze financial innovation on the financial performance of SACCOs in Meru County. Primary data was collected by the use of a self-administered questionnaire so as to gather the required data. This was followed by requests for approval from the management of the afore-stated SACCOs. The questionnaires were then distributed to the sampled respondents through their managers. Secondary data was obtained from SASRA records of financial statements of the SACCOs. Specifically, Return on Assets (ROA) was obtained from the

financial statements of SACCOs for the years from 2015 to 2019 in order to measure their financial performance.

3.9 Methods of Data Analysis

Data analysis, according to Mugenda (2005), is the process of putting the gathered data into a coherent whole. According to each dependent and independent variable, secondary data was gathered, coded, tabulated, and analyzed using descriptive statistics in terms of mean values.

Descriptive analysis methods were used to analyze the largely quantitative data that had been gathered. In order to describe and clarify data and confirm the application's scope, SPSS, Excel, and the descriptive statistical method were used. Data was presented and reported using descriptive statistics like standard deviation and mean.

To ascertain how independent variables affect the dependent variable, multiple regression analysis models were used. To find out how the independent variables and dependent variable Interact, the correlation coefficient was used.

The impact of independent variables on the dependent variable in the multiple regression analysis was evaluated using Analysis of Variance (ANOVA)

The following regression model guided the study.

$Y= \beta 0 + \beta 1X_1+ \beta 2X_2+ \beta 3X_3+ \varepsilon$

Where:

Y is Financial Performance (ROA)

$\beta 0$ is Constant.

X_I= % of Process Innovation

X_2= % of Product Innovation

X_3=% of Institution Innovation

a= The constant of regression

e= The error term.

β1, β2, β3 are Regression coefficients of independent variables.

3.10 Logical and ethical issues

According to Mugenda and Mugenda (2003), a researcher must conform with the principle of voluntary consent where the respondents willingly participate in research. Informed consent ought to be based on the information regarding the intention of the research study, identification of the researcher, any benefits that may be received. Mugenda (2008) notes that participation in research is voluntary, and subjects are at liberty to withdraw from the study at any time without any consequences. The researcher communicated this to the respondents before the start of the study, and no respondent was forced to take part in the study but participated voluntarily.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents descriptive statistics of the responses on financial innovations and financial performance of SACCOs in Meru County. The results were analyzed using descriptive statistics. A five-point Likert scale was used to establish respondents' perceptions of the variables of the study.

4.2 Rate of Response

The response rate equates to the number of people with whom semi-structured questionnaires were properly completed divided by the total number of people in the entire sample (Fowler, 2013). The study gave out 66 questionnaires for data collection. However, 54 questionnaires were properly filled and returned. This represented 82% of the total successful response rate. Respondents were guaranteed confidentiality of the information provided. Mugenda and Mugenda (2009) suggested that a response rate of 50% is adequate, 60% is good, and 70% and above is very good for analysis. This means that an 82% response rate was proper for data analysis.

4.3 General Information

4.3.1 Respondents' Gender

The respondents were asked to indicate their gender.

Table 4.1: Gender of Respondents

	Frequency	Percentage
Male	30	55%
Female	24	45%
TOTAL	**54**	**100%**

Source: Research Data (2021)

Table 4.1 shows that the study's 54 participants included 30 (55%) male and 24 (45%) were female. This indicates that it was a good distribution that depicts a fair balance of gender. The responses for this study depend on the perceptual measures of the respondents and the gender distribution was projected to accommodate opinions and views of the gender divide.

4.3.2 Respondents Highest level of Education

The respondents were requested to indicate their highest education qualifications'.

Table 4.2: Respondents' Highest Level of Education

	Frequency	Percentage
Undergraduate	27	50%
Diploma	15	28%
Certificate	7	13%
Masters	5	9%
TOTAL	**54**	**100%**

Source: Research Data (2021)

According to the findings, 27(50%) of the respondents indicated that they had a bachelor's degree as their highest level of education, 15 (28%) indicated that they had attained a diploma, 7(13%) indicated that they had attained a college certificate while 5 (9%) had attained a master's

degree. This shows that most of the respondents employed by the SACCOs were a good sample and well-educated respondents had the ability to provide the study with better information.

4.3.3: The SACCO's Ownership

The respondents were asked to indicate the ownership category of the SACCO.

Table 4.3 Responses on Ownership of the SACCO

	Frequency	**Percentage**
General Public	29	54%
Farmers	10	19%
Teachers	5	9%
Government	5	9%
Private Sacco	5	9%
TOTAL	**54**	**100%**

Source: Research Data (2021)

Table 4.3 shows that 29 (54%) of the employees work in SACCOs that have opened up to the general public, 10 (19%) are specifically owned by farmers, 5 (9%) of the members are teachers, 5 (9%) owned by state corporation employees and 5(9%) are privately owned SACCOs. The results indicate that majority of the SACCOS ownership of SACCOs are open to the general public.

4.3.4: Current Designation Within The SACCO

The respondents were asked to indicate their current designation within the organization.

Table 4.4 Respondents' Current Designation Within The SACCO

	Frequency	Percentage
Credit Department	15	28%
Accounts Department	13	24%
Customer Care Officers	12	22%
Marketing Department	9	17%
Management	5	9%
TOTAL	**54**	**100%**

Source: Research Data (2021)

Table 4.4 shows that 15(28%) of the respondents were from the Credit department, 13(24%) of the respondents were from the Accounts department, 12 (22%) were Customer Care Officers, 9 (17%) from the Marketing department and 5 (9%) of the respondents from Management level. This profile distribution was important since the study aimed at capturing the opinions of all group levels of employees in the organization as a unit of observation.

4.3.5: Years of Operation

The respondents were asked to indicate how long the SACCO had been in operation.

Table 4.5: Response on The Number of Years SACCO Has Been in Operation.

	Frequency	Percentage
0-5 Years	5	9%
6-10 Years	5	9%
11-15 Years	10	19%
16-20 Years	10	19%
20 Years and Above	24	44%
TOTAL	**54**	**100%**

Source: Research Data (2021)

Table 4.5 above shows that 5 (9%) of the SACCOs have been in operation in Meru for less than 5 years, 5(9%) for 6 to 10 years, 10 (19%) between 11-15 years, while 10 (19%) for 16 to 20 years and 24 (44%) have operated for more than 20 years. As a result, most of the SACCOs analyzed have been in operation for more than 20 years.

4.3.6 Number of SACCO Members

The respondents were asked to indicate the number of members in the SACCO.

Table 4.6 Number of SACCO Members

	Frequency	**Percentage**
Below 500	5	9%
501-1000	7	13%
1001-1500	10	19%
1001-2000	14	26%
Over 2000	18	33%
TOTAL	**54**	**100%**

Source: Research Data (2021)

Table 4.6 above shows 5(9) of the respondents indicated their SACCOs have less than 500 members, 7 (13%) of the SACCOs have between 501-1000 members, 10 (19%) have between 1001-1500 Members and 12(26%) have between 1001-2000 members over 2,000 members were (33%). This implies that the majority of the SACCOs have over 2000 members in their SACCO.

4.3.7: Years of Applying Modern Technology and Financial Innovation.

The respondents were asked to indicate the duration the SACCO has been applying modern technology and financial innovations.

Table 4.7: Application of Modern Technology and Financial Innovations.

	Frequency	Percentage
Past 1 year	0	0
2-5 years	9	17%
6-10 Years	11	20%
Over 10 years	34	63%
TOTAL	**54**	**100%**

Source: Research Data (2021)

Table 4.7 According to the findings, none of the respondents indicated using modern technology and financial innovations for less than one year. However, 9 (17%) stated they have been using modern technology and financial innovation for 2-5 years while 11 (20%) stated they have been using modern technology and financial innovations for 6-10 years. 34 (63%) of the respondents indicated that they had been applying modern technology and financial innovations for over 10 years, this shows that the majority of the SACCOs have been using modern technology and financial operations for quite some time in their day-to-day operations.

4.3.8. Influence On Embracing Financial Innovation

The respondents were asked to indicate what influenced the SACCO to embrace innovation.

Table 4.8: Response on Influence of Financial Innovation

	Frequency	Percentage
Competition	6	11%
Customers	6	11%
Efficiency	21	39%
Accessibility	21	39%
TOTAL	**54**	**100%**

Source: Research Data (2021)

According to the findings in Table 4.8: 6 (11%) of the respondents indicated that competition was the main influence in embracing technology, 6(11%) indicated getting more customers influenced implementation of technology, 21 (39%) of the respondents indicated efficiency influenced them to embrace innovation while 21 (39%) indicated accessibility influenced the SACCOs to embrace innovation. This shows that efficiency and accessibility was the major influence in embracing innovation.

4.4 Descriptive Statistics

This section presents the findings and interpretations of the descriptive statistical analysis of the data. Means and standard deviations are among the descriptive statistics used. The data design was useful in developing the basic characteristics of the research population and establishing the foundation for the quantitative data analysis. The section presents responses to the product, process, and institutional Innovations on the performance of Meru County SACCOs. A five-point Likert scale where 1=Not at All; 2=Low Extent; 3= Moderate Extent; 4= Great Extent and 5=Very Great Extent were used to establish respondents on Financial Innovations and SACCO Financial performance.

4.4.1: Process Innovation

Table 4.9: Process Innovation Descriptive Statistics

Process Innovation Statements:	N	Min	Max	Mean	Std Dev.
Adoption of Mobile banking has improved employees. effectiveness and productivity.	54	1	5	4.056	0.834
EFT has reduced the cost of operation and enhanced efficiency in service delivery.	54	1	5	3.852	0.960
Internet Banking process has improved service quality leading to customer satisfaction and customer retention.	54	1	5	4.074	0.929
Automation of the SACCO systems have improved our market share and profitability.	54	1	5	3.426	0.983

Source: Research Data (2021)

According to the findings shown in Table 4.9, the respondents indicated they strongly agreed (Mean = 4.056) with the statement that adoption of mobile banking has improved employee's effectiveness and productivity. Respondent also agreed that Electronic Fund Transfer process has reduced the cost of operations (Mean = 3.852) enhancing efficiency in service delivery. The study further indicated internet banking process used by the SACCOs with a (Mean = 4.074) has improved service delivery leading to customer satisfaction and retention. Additionally, respondents concurred (Mean = 3.426) that automation of the SACCO systems has improved their market share and profitability.

4.4.2: Product Innovation

Table 4.10: Product Innovation Descriptive Statistics

Product Innovation Statements	N	Min	Max	Mean	Std Dev.
The introduction of new deposit Accounts has attracted more members to the SACCO.	54	1	5	4.037	0.889
SACCO loan products are improved regularly to match customers' needs and expectations of diverse social classes.	54	1	5	3.074	1.043
SACCO's Savings products are simple to understand and well customized to deliver a long-term competitive advantage.	54	1	5	4.259	0.757
Adoption of debit cards has enhanced flexible banking services.	54	1	5	3.056	1.140

Source: Research Data (2021)

The purpose of the study was to determine the effect of product innovation on financial performance of SACCOs in Meru County. The findings are shown in Table 4.10. The mean

score for the statement “Introduction of a new deposit account has attracted more members to the SACCO” had a fairly high mean (Mean = 4.037). The statement “SACCO loan products are improved regularly to match customers’ needs and expectations of diverse social classes” had mean (Mean = 3.074). The statement “SACCO’s saving products are simple to understand and well customized to deliver long-term competitive advantage” had the highest mean (Mean = 4.259). The statement “Our debit cards have enhanced flexible banking services had the lowest mean (Mean = 3.056).

4.4.3. Institution Innovation

Table 4.11: Institution Innovation Descriptive Statistics

Institution Innovation Statements	N	Min	Max	Mean	Std Dev.
Financial Innovation is included as a deliberate goal in the SACCOs’ long term strategic plans.	54	1	5	4.067	0.986
SACCO has a good team structure and the right type of leadership to effectively drive innovation.	54	1	5	3.981	0.981
The SACCO pursues key linkages and alliances with service providers and strategic institutional partners to ensure the minimization of costs.	54	1	5	3.704	1.011
Technology adoption is a top priority for Sacco management which has improved the SACCOs image.	54	1	5	3.696	1.023

Source: Research Data (2021)

The study examined the effect of institution innovations had on the performance of SACCOs in Meru County. The results are presented in Table 4.11. The finding disclosed that the respondents acknowledged a (Mean = 4.167) that financial innovation is included as a deliberate goal in the SACCOs long term strategic plans. Respondents also confirmed that the SACCO has a good team structure and the right type of leadership to effectively drive innovation (Mean = 3.981).

The respondents also established with the statement that pursuing key linkages and alliances with service providers and strategic institutional partners has ensured minimization of costs (Mean = 3.704). SASRA requires the institutions to adopt management information systems to enhance the security of customer data, provide an audit trail report and real-time management (SASRA, 2016). It was also evident that technology adoption is a top priority for SACCO management which has improved the SACCOs image (Mean = 3.296).

4.4.4. Financial Performance

Table 4.12: Financial Performance Descriptive Statistics

Performance Statements	N	Min	Max	Mean	Std Dev
Total Income has increased over time as a result of financial innovation.	54	1	5	3.981	0.739
Total Deposits have increased over the years as a result of financial innovations.	54	1	5	3.333	1.009
SACCOs have advanced more cumulative loans due to process innovation	54	1	5	4.055	0.787
SACCOs Total Assets have grown over the years as a result of financial Innovations.	54	1	5	3.129	1.065

Source: Research Data (2021)

In terms of the effect of financial innovation on the performance of SACCOs, the researcher received the above response. As per table 4.12 of the study, respondents admitted (Mean 3.981) that Total Income has increased over the years due to financial innovations. Respondents also agreed that financial innovations have increased total deposits with (Mean = 3.333) over the years. The findings also revealed that SACCOs have advanced more cumulative loans as a result of process innovations with (Mean = 4.055). The majority of the respondents agreed

(Mean=3.129) with the statement that SACCOs' total assets have increased steadily due to the adoption of financial innovations.

Table 4.13: Return on Assets Descriptive Statistics

	2015	2016	2017	2018	2019	Mean	Std Dev
Total Assets (Kshs. Billions)	75.23	82.38	129.04	168.60	128.30	6.48	12.02
Total Deposits (Kshs. Billions)	50.57	57.66	66.75	73.87	85.86	3.72	7.50
Gross Loans (Kshs. Billions)	51.55	58.52	94.80	81.02	96.68	4.25	7.85
Net Income (Kshs. Billions)	9.027	15.65	55.49	21.92	78.26	0.67	6.47
ROA	**0.12**	**0.19**	**0.43**	**0.13**	**0.61**	**0.02**	**0.22**

Source: Research Data (2021)

For the period 2015-2019, total assets had the highest mean (Mean=6.48), while total equity had the lowest (Mean=0.18). The year with the highest total assets (168.60), an indicator of the efficiency of SACCOs in using their assets to generate revenue, was 2018, while the year with the lowest total assets was 2015. Total deposits in 2019 were the highest (85.86), whereas total deposits in 2015 were the lowest (50.57). This is consistent with the findings of Musasiah (2010), who concluded that deposit levels influenced lending and the growth of SACCOs in Nairobi County. In the study period, 2019 had the highest gross loan (96.68), while 2015 had the lowest gross loan (51.55). Over the course of the study, 2015 had the lowest ROA of 0.12 and 2019 had the highest ROA of 0.61. As indicated in Table 4.13, the performance of SACCOs fluctuated

over the last five years of the study, with ROA for 2016 (0.19), 2017 (0.43), and 2018 decreasing to (0.13), indicating that the level of performance of SACCOs is not consistent, a fact that can be linked to other variables in the study.

4.5: Correlation Analysis

This study adopted a correlation analysis to establish statistical relations between two or more variables such that systematic changes in the value of one variable are accompanied by systematic changes in the other variable. Hypothesis testing was subjected to statistical analysis as shown below. Pearson's correlation analysis and multiple regression analysis were used to test the study hypotheses.

4.5.1: H_{o1}: There is no significant relationship between process innovations and financial performance of SACCO's in Meru County

Correlation between Process Innovations and Performance of SACCOs was conducted to determine the linear correlation between the independent variables and the dependent variable.

Table 4.14: Process Innovation and ROA

		Performance
Process Innovation	Pearson Correlation	0.439
	Sig 2 tailed	0.0008
	N	54

**At the 0.05 level, the correlation is significant (2-tailed).

Source: Research Data (2021)

The correlation analysis results in Table 4.14 show that there is a positive correlation between process innovation and performance ($r=0.439$, $p<0.05$). The study rejects the null hypothesis that there is no significant relationship between process innovation and the performance of SACCOs in Meru County. This implies that any effort to improve the design process such use of ATM, introduction of internet banking, office automation or introduction of electronic transfers or introducing any cost of adopting ICT delivery of services, or other innovation techniques such as SACCO digitization will result in improved performance. These study results are consistent with the findings of Gichana (2015), who discovered that process innovation had a positive effect on a firm's financial performance.

4.5.2 Ho_2: There is no significant relationship between product innovations and the performance of SACCOs in Meru County.

Correlation between Product Innovations and Financial Performance SACCOs was conducted to determine the linear relationship between the independent variables and the dependent variable.

Table 4.15: Product Innovation and ROA

		Performance
Product Innovation	Pearson Correlation	0.314
	Sig 2 tailed	0.020
	N	54

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

Source: Research Data (2021)

The correlation between product innovation and the performance of SACCOs in Meru County was evaluated. Table 4.15 exhibits the results of the correlation analysis. The study found a positive and statistically significant relationship between product innovation and financial performance ($r=0.314$, $p<0.05$). The study, therefore, rejects the null hypothesis that there is no significant relationship between product innovation and the performance of SACCOS in Meru County. This implies that an increase in the introduction of new deposit accounts, having different types of loan and savings options, introduction of debit and credit cards will enhance the performance of SACCOs in Meru County. These findings support those of Mosongo (2013), Githakwa (2011) and Tabas et al., (2012) and are in agreement with Sidek (2013) who observed that product innovation indeed significantly influences firm performance.

4.5.3 Ho_3: There is no significant relationship between Institution innovations and the performance of SACCOs in Meru County.

Correlation between institution Innovations and Performance of SACCOs in Meru County was conducted to determine the linear correlation between the independent variables and the dependent variable.

Table 4.16: Institutional Innovation And ROA

		Performance
Institution Innovation	Pearson Correlation	- 0.205
	Sig 2 tailed	0.1367
	N	54

**. At the 0.05 level, correlation is significant (2-tailed).

Source: Research Data (2021)

According to the findings, there is a negative association between institutional innovation and the performance of SACCOs in Meru County as presented in Table 4.16. The Table indicates that the correlation between institution innovation and performance is relatively weak, and not statistically significant. The significance level for the t- statistic is greater than 0.05 (r= -0.205, p>0.05) the study accepts the null hypothesis that there is no significant relationship between institution innovation and performance of SACCOs in Meru County. This implies that a unit increase in strategic planning, change in leadership in an organization structure, agency banking partnerships, technology adoption leads to negative performance for the organization.

4.5.4 Regression Analysis for Overall Model

The study sought to determine the nature of the relationship, which are the strength and the direction of the relationship that exists between the study variables.

Table 4.17: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimation
	0.513[a]	0.263	0.219	0.636

Source: Research Data (2021)

The study evaluated the effect of financial innovation under study (process, product & institutional innovation) and performance (ROA) of SACCOs in Meru County. Using multiple regression analysis, the combined effect of the product, process and institution innovation on the performance of SACCOs was established. The results in Table 4.17: R square R^2 equals 0.263 this means that 26.3% of the variance of Y is explained by X. Adjusted R square equals 0.219 and Multiple correlations (R) equals 0.513. It means that there is a moderate direct relationship between predicted data and the observed data.

4.5.5 Analysis of Variance

The probability value (p-value) of a statistical hypothesis test is to find a value of the test statistic as either extreme or more than extreme than that observed by chance alone, which implies that if the null hypothesis H_0 is true. The p-value is compared with the actual significance level of the test and if it was smaller the result is significant. The smaller it is the more convincing is the rejection of the null hypothesis.

Table 4.18: ANOVA[b]

Model	DF	Sum of Squares	Mean Square	F	Sig.
Regression	3	0.236	0.079	5.946	0.001
Residual	50	0.663	0.013		
Total	53	0.899	0.017		

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

Source: Research Data (2021)

The results of the analysis of variance (ANOVA) are shown in Table 4.18, indicate that right-tailed $F_{(1, 50)} = 5.946$, since $p < 0.05$ H_0 is rejected. These findings imply that the results are statistically significant and show that there is a significant effect on financial innovation and the performance of SACCOs in Meru County.

4.5.6 Regression Coefficients

The regression equation can be explained by the following regression coefficients.

Table 4.19: Regression Coefficient

Model		Unstandardized Coefficient	Standardized Coefficient			
	B	Std Error	Beta	t	Sig	VIF
Constant	-0.022	0.171	0.000	-0.129	0.897	
Process	0.073	0.024	0.384	3.014	0.040	1.101
Product	0.047	0.333	0.179	1.399	0.167	1.113
Institution	-0.042	0.027	-0.183	-1.502	0.139	1.011

Source: Research Data (2021)

The coefficients and P values for the variables in the study are shown in Table 4.19. The findings show that process innovation ($p < 0.05$), product innovation ($p < 0.05$), and institutional innovation ($p > 0.05$) are all significant.

The interpretations of the findings indicated the following regression model.

$Y = -\beta 0 + \beta 1X_1 + \beta 2X_2 + \beta 3X_3 + e$

Therefore,

$Y = -0.022 + 0.073x_1 + 0.047x_2 - 0.042x_3$

Where

Constant = indicates that if financial innovation includes product, process, and institution, as well as a ratio/ percentage of revenue from new ideas divided by the cost of implementing the new ideas, then the financial results of SACCOs is -022.

A unit change in process innovation results in a 0.073 unit increase in financial performance, as shown by $X_1 = 0.073$.

$X_2 = 0.047$ indicates that a unit change in product innovation leads to a 0.047 unit increase in financial performance.

A unit change in institutional innovation results in a 0.042 unit decrease in financial performance, as shown by X3= 0.042

4.5.7 Multicollinearity – Intercorrelations.

There is no multicollinearity concern as all the VIF values are smaller than 2.5.

4.6: Discussion of the Study Findings

This study sought to determine the dependent and independent relationship and descriptive analysis findings on process innovation established as shown in table 4.9 that internet banking process innovation has improved service quality leading to customer satisfaction and retention with the highest (Mean = 4.074) it is noted that adoption of mobile banking has improved employee's effectiveness and productivity with a relatively high (Mean=4.056) followed by introduction of EFT has reduced operation cost leading to efficiency in service delivery (Mean = 3.852) while automation has led to improvement in market share and profitability had the lowest (Mean = 3.426). The findings coincide with Walker et al. (2010), who observed that the adoption of new management systems, having new techniques and processes make management work more effective and efficient, leading to high performance.

Results obtained from descriptive analysis on Table 4.10: indicate that SACCO's Savings products are simple and well customized with the highest mean (Mean = 4.259), introducing new deposit accounts had a fairly high (Mean = 4.037). While having improved on the loan products to match customers' needs and expectations had (Mean = 3.074) and adoption of debit cards had the lowest (Mean = 3.056). The study coincides with Anthony and Susan (2017) found a positive effect of product differentiation and the competitive strategies adopted by DT-SACCOs; the research further indicated there was a significant effect on customer satisfaction within the SACCOs. However, a study by Atkin et al. (2017) showed uncertainty in innovations. There was a low demand and adoption for new products and new technologies among firms' products.

The results are presented in Table 4.11. The finding respondents acknowledged with a (Mean = 4.067) that financial innovation is included as a deliberate goal in Sacco's long-term strategic plans. Respondents also confirmed that a good team structure with the right type of leadership effectively drives innovation (Mean = 3.981), while SACCOs can minimize cost by pursuing key linkages and alliances with service providers and strategic institutions (Mean = 3.704). However, technology being adoption a top priority for the SACCOs management had the lowest (Mean = 3.296). The study concludes that effective leadership has a direct impact on the financial performance of SACCOs. These findings echo what Ndun'gu (2011) found that SACCO considered effective leadership as a predictor of operating efficiency and performance of the institution.

The results as presented in Table 4.12 indicate that the effect of financial innovation on the performance of SACCOs demonstrates advancement of loans had the highest mean (Mean = 4.055). There was an improvement in Total Income (Mean 3.981) while financial innovations improved the total deposits with (Mean = 3.333). In contrast, Total assets had the least (Mean=3.129). These findings coincide with Kimani (2016), who asserted that innovation increases a firm's profits, market share, savings and reduces operating costs.

The study analyzed data from 2015-2019 as shown in Table 4.13, For the period 2015-2019, total assets had the highest mean (Mean=6.48), whereas Net Income had the lowest (Mean= 0.67). The year with the highest total assets (168.60), an indicator of the efficiency of SACCOs in using their assets to generate revenue, was 2018, while the year with the lowest total assets was 2015. Total deposits in 2019 were the highest (85.86), while total deposits in 2015 were the lowest (50.57). This is consistent with the findings of Musasiah (2010), who discovered that deposit levels influenced lending and the growth of SACCOs in Nairobi County. In the study

period, 2019 had the highest gross loan (96.68), while 2015 had the lowest gross loan (51.55). The lowest ROA was 0.12 in 2015, and the highest was 0.61 in 2019.

Gross loans were at the highest in 2019 (96.68), while 2015 had the lowest gross loan (51.55) in the study period. 2015 showed the lowest ROA of 0.12, and 2019 showed the highest 0.61 over the study period. As indicated in Table 4.13, the performance of SACCOs fluctuated over the last five years of the study, with ROA for 2016 (0.19), 2017 (0.43), and 2018 decreasing to (0.13), indicating that the level of performance of SACCOs is not consistent, a fact that can be linked to other variables in the study. According to Mwaniki (2018), an increasing ROA show how an organization uses its assets efficiently to generate profit. it is also a reflection of how well an organization's management is deploying the shareholders' capital. On the other hand, a low ROA indicates that an organization may be mismanaged and could be reinvesting earnings into unproductive assets.

A multivariate model was applied to establish the relative effect of each of the three variables in regard to the effects of financial innovation and performance of SACCOs in Meru, Kenya. The findings of this study established that the effect of the process, product, institution, and ROA from new innovations influence the financial performance of SACCOs results obtained from the regression analysis and the coefficient of determination (R squared of 0.219) in table 4.17 shows the variation in the dependent variable as a result of changes that occurred in the independent variables. The findings obtained from this study reveal that the regression analysis shows a process, product and institutional, and ROA from new innovations at a 95% confidence interval. R is the correlation coefficient that presents the association between the variables in the study According to the data in Table 4.17, the research variables had a moderately favourable relationship, as evidenced by the correlation coefficient R of 0.513.

ANOVA analysis intended to ascertain whether variation in the independent variables explains the observed variance in the outcome, that is, the financial performance of SACCOs in this study. ANOVA findings in table 4.18 indicate that there is a correlation between the predictor variables, which are process, product, and institution innovation and ROA from new innovations, and the response variable is the financial performance since P-value of 0.000. This study establishes that there is a strong relationship between the study variables. The coefficient of determination (R) determines how well the independent variable can influence the dependent variable.

From table 4.19, The SACCO's financial performance is -0.022 if all the independent variable values are set to zero in this model. Process innovation variable, x_1 shows that one unit change in process innovation 0.073 units increase in the financial performance, Regression coefficient for process innovation (0.073) is statistically significant ($t=3.014$ $p=0.04<0.05$). This suggests that if a SACCO introduces a new business process, then performance will improve significantly. The study finding coincides with research results of Gichana (2015), who found that an organization's growth is positively affected by process innovation.

Product innovation X_2 shows that one unit change in the product innovation increase leads to 0.047 units increase in financial performance. The regression coefficient for product innovation (0.047) is statistically significant ($t=1.399$, $p=0.167>0.05$). This implies that if SACCO launches a new product such as new savings accounts, a range of loan products to meet different customer's needs the institution's performance will improve. This finding is line with the observations of Ahoya (2015), who concluded that product innovation had a favourable and significant impact on Kenya Commercial Bank's financial performance.

Institution Innovation shown as X_3= this demonstrates that a -0.042 unit decrease in financial performance emerges from one unit change in institution innovation. These findings imply that process innovation has the greatest positive impact on financial performance, and this is followed by product innovation and, finally, institution innovation. Regression coefficient for institutional innovation (-0.042) was moderately weak but statistically significant (t= -1.502, p=0.139>0.05). The findings correspond to the study by Martin (2016), who ascertained that firms ought to focus more on institution and product innovation.

The study analyzed the dependent and independent relationship and applied multiple regression analysis. A multivariate regression model was used to determine the relative impact of each of the three factors: process innovation, product innovation, and institution. Performance and innovation. Regression analysis was conducted to establish that the three of the independent variables (process, product and institution innovation had a positive correlation with the dependent variable performance (ROA). The study established coefficient of determination (R): was 0.513 correlation coefficient (R-squared): 0.219, F-test statistics (5.946) and P-value (0.001) and since R was positive (0.513), the relationship between financial innovation and performance of SACCOs was positive. The results matched the study done by Gakure and Ngumi (2013) they established that 47.8 % of the performance of commercial banks was explained by innovations. However, this current study has a higher coefficient of determinations which is 0.219.

To see if the variation in the independent variables explains the observed variance in the outcome, an ANOVA analysis was used. The results of the ANOVA demonstrated a correlation between the predictor variables of process, product, and institution innovation in this study. the p-value of 0.000 which was less than 0.95 (95%) implied that there was a strong positive relationship between variables employed in this study.

CHAPTER FIVE: CONCLUSION, RECOMMENDATIONS AND PUBLICATION

5.1 Introduction

The key findings, conclusions, and recommendations resulting from the data analysis in the preceding chapter are summarized in this chapter. The researcher concludes and makes recommendations about financial innovations and the performance of SACCOs in Meru County.

5.2 Summary of Main Findings

The study's overall aim was to determine the effects of financial innovation. (Namely, product, process and institution) and performance measured by ROA of SACCOs in Meru County. There were three objectives that guided the research: To evaluate the effects of process innovations on the performance of SACCOs in Meru County; to determine the effect of product innovations on the performance of SACCOs in Meru County; and to establish the effect of institutional innovations on the performance of SACCOs in Meru County. The outcome of the study divulged that competition within financial institutions is getting harder day by day due to globalization, deregulation, increasing global and domestic competition, new technologies, and e-commerce. Companies are competing for customers; market share and long-term survival while customers are becoming more sophisticated, segmented, and demanding, therefore, expecting more in terms of customization, novelty, value and price.

This study sought to determine the dependent and independent relationship and descriptive statistics findings on process innovation established that process innovation has improved customer satisfaction and retention; there was an improvement in employee's effectiveness and productivity leading to a reduction in operational costs improving the market share and profitability in general. It was observed that organizations need to implement various financial innovations in order to fulfil the needs of their customers. The results of the study are interpreted

to mean that the development or adoption of new product innovations would result in improved financial performance for the entire organization. The findings also revealed that the corporate vision, which dictates the direction in which a company wishes to develop, must be the foundation of innovation activity: the innovation orientation of a company must start from the corporate vision and this can be achieved if the SACCO has the right leadership to help the team create a vision while being able to envision the future of the business, as well as the benefits of such innovation. The study reveals that strategic alliances help SACCOs to gain on technology, reduce political and financial risks since spread among the partners, alliances help in penetration of various market niches and also to achieve competitive advantage.

Secondary data was gathered from financial reports from Sacco Societies Regulatory Authority (SASRA), Sacco's websites and financial journals. It was discovered that the Return on Assets is dependent on the financial innovations implemented by the organization. A significant majority of respondents consented that financial innovations contribute to increasing the organization's profit margins and maximizing shareholder wealth. These findings are interpreted to mean that the organization's financial performance would improve if financial innovation was implemented. The findings suggested that firms would do better financially if they adopted financial innovation.

5.3 Conclusion

Based on the findings that are consistent with the research objectives and hypotheses, the study outlines the following conclusions. The first hypothesis, which is supported by other empirical studies, states that new process innovation techniques improve the performance of SACCOs in Meru County. To increase efficiency, processes must be innovated using a combination of skills, facilities, and technologies. When done correctly, it results in cost and time savings without

compromising the quality of products or services. This means that how the innovation is designed determines how the end-user will experience, interact with, and generally respond to what is developed. Furthermore, the SACCOs' service performance, customer retention, profitability, and market share have all improved as a result of the innovation strategies deployed.

According to the study the outcomes of process innovation are tangible it therefore reflects how well a company executed its innovation strategy hence the necessity for SACCOs to provide solutions and provide value by giving exceptional and exemplary services. It should be noted that services are distinct due to their intangibility, simultaneity, and heterogeneity qualities. As a result, processes must be enhanced in order to improve customer service and loyalty and this can be achieved by aligning innovation efforts with the desires, needs, and ideas of the SACCOs to its market's constituents. According to research, increased retention leads to higher market share, which leads to higher revenues. Numerous studies have demonstrated that the cost of serving a single loyal customer is five to six times less than the cost of finding and serving one new customer (Ndubisi, 2003; Rosenberg & Czepiel, 1983).

In relation to the second hypothesis, the accomplishment of any innovation is determined by the quality of the products used, the appropriate use of the product, the value of the innovation used, and the expertise of the person required to implement it. Results of the findings indicate that the introduction of new products has a positive impact on the performance of SACCOs in Meru County, which is consistent with other empirical studies. As a result, the study indicates that product innovation entails more than just creating items that appeal to a broad market, target a profitable consumer segment, or fill a gap in the market. SACCOs, on the other hand, must adapt to the needs of their customers by producing high-quality, standardized products that are both

innovative and environmentally beneficial. Nevertheless, the products can be enhanced by having features aggregated by combining the functions of multiple products into one, or by upgrading an existing product with new features or applications. Product innovation is revealed to be a complex process spurred by changing customer expectations, shorter product life cycles, and more global competition, according to the study.

The results of the third hypothesis contradict several scholars and other works of literature. According to the study, institutional innovation had a weak negative relationship on the performance of SACCOs in Meru County. Institutional factors such as government Research and Development investments, innovation policies, and the institutional environment all play important roles in influencing firms' decisions to innovate. SACCOs must include financial innovation as a deliberate goal in their long-term plans. This establishes boundaries for their innovation performance expectations by simplifying and structuring their innovation work to achieve the best possible outcome, which increases returns to members and improves the organization's image.

Institutional support is the financial and technical assistance provided by management in providing critical resources for research and development. As a result of their direct control over the organizational structure, the management team has the ability to influence innovation within SACCOs. This translates to how important it is for SACCOs to put in place effective leadership structures that will be harnessed to improve performance. This can be accomplished by having innovative leaders with expertise in the area that requires innovation, knowing the specifics of where their organization stands in terms of technology, and demonstrating a professional curiosity about where it could go by embracing forward-thinking employees and processes.

5.4 Recommendations from the Study

The study strongly recommends that as other financial institutions are cutting down their expenditure by closing down their firm branches to invest in self-service digital channels, SACCOs should also exploit the opportunities by employing technologies in-house or working with FinTech companies, SACCOs can take advantage of the opportunities created by digitalization. These methods would expand the use of technology in order to maintain a constant and proactive commitment to digitalization as well as the adoption of innovative solutions in order to improve operational efficiencies accelerates time to market, and provide improved customer experiences. The study suggests that governments, through SASRA and the Ministry of Industry and Co-operative Development, provide conducive environment that encourage SACCOs to innovate in order to function properly and succeed through beneficial legislation.

5.5 Recommendations for Further Study

This study examined the effect of financial innovation and the performance of Saccos in Meru County and based on the findings, the study found a weak significant relationship between institutional innovation and the performance of SACCOs. Further studies should explore the area of institutional innovation and performance.

5.6 Publication

Effects of Process and Product Innovation on Performance of Savings and Credit Co-Operative Societies in Meru County, Kenya.

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https://www.iosrjournals.org/iosr-jef/pages/vol.13i1-Series-4.html

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APPENDICES

Appendix I: Letter of Introduction

MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF ACCOUNTING & FINANCE

7th January, 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: EUNICE MURUGI GAICHURU - BS401/2604/15

This is to confirm that Eunice Murugi Gaichuru is a Master of Business Administration (MBA) Student from Meru University wishing to undertake research in your organization.

The topic of the research is: **Effects of Financial Innovation on Performance of Savings and Credit Cooperative Societies in Meru County, Kenya.**

Any assistance accorded to her will be highly appreciated.

Thank you.

8 JAN 2021

Mr. John Mbogo
COD – Accounting & Finance

Appendix II: Questionnaire

The information collected from each questionnaire will be used for academic purposes only and the responses will be treated with the utmost confidentiality.

Section A: Respondents' Background Information (Tick where applicable)

1. Please indicate your gender.

Male ☐ Female ☐

2. Please state your highest education level

Certificate ☐ Diploma ☐

Undergraduate ☐ Masters ☐

Other (……)

3. Which ownership category best describes your SACCO?

Government employees ☐ Teachers ☐

Private Sector employees ☐ Farmers ☐

Other (.....)

4. What is your current designation within the SACCOs Departments?

Management ☐ Marketing Department ☐

Accounts ☐ Credit Department ☐

Customer Service ☐ ICT ☐

5. When was your SACCO registered?

0 - 5 Years ☐ 6 - 10 Years ☐

11 - 15 Years ☐ 16 - 20 Years ☐

20 Years and above ☐

6. How many members does your SACCO have?

Below 500 Members ☐ 501 - 1000 Members

1001 - 1500 Members ☐ 1501 - 2000 Members ☐

2000 and above ☐

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

Past 1 Year ☐ 2-5 Years ☐

6-10 Years ☐ Over 10 years ☐

8. What influenced your organization to embrace innovation?

Competition ☐ Accessibility ☐

Efficiency ☐ Customers ☐

SECTION B:

i. Process Innovation and Financial Performance

Kindly respond using a tick (√) where the response matches your opinion on; the extent to which process innovation affects the financial performance of the SACCO.

	Not At All 1	Low Extent 2	Moderate Extent 3	Great Extent 4	Very Great Extent 5
Mobile Banking: Adoption of mobile banking has improved employee's effectiveness and productivity.					
The use of EFT has reduced the cost of operation and enhanced efficiency in service delivery.					
Internet banking has improved service quality leading to customer satisfaction and customer retention.					
Automation of the SACCO systems have improved its market share and profitability.					

ii) Product Innovation and Financial Performance

Kindly respond using a tick (√) where the response matches your opinion on; the extent to which product innovation affects financial performance of the SACCO.

1: Not At All, 2: Low Extent, 3: Moderate Extent, 4: Great Extent, and 5: Very Great Extent.

	Not At All 1	Low Extent 2	Moderate Extent 3	Great Extent 4	Very Great Extent 5
The introduction of new products has attracted more members to the SACCO.					
Our products are enhanced and improved regularly to match customers' needs and expectations of diverse social classes.					
SACCO's products are simple to understand and well customized to deliver a long-term competitive advantage.					
Our products are distinctively differentiated informed by the unique characteristics of clients from different market segments.					

iii) Institution Innovation and Financial Performance

Kindly respond using a tick (√) where the response matches your opinion on, the extent to which Institution innovation affects financial performance of the SACCO.

	Not At All 1	Low Extent 2	Moderate Extent 3	Great Extent 4	Very Great Extent 5
Financial Innovation is included as a deliberate goal in the SACCOs' long term strategic plans.					
SACCO has a good team structure and the right type of leadership to effectively drive innovation.					
The SACCO pursues key linkages and alliances with service providers and strategic institutional partners to ensure the minimization of costs.					
Technology adoption is a top priority for Sacco management which has improved the SACCOs image.					

iv) Financial Performance

Kindly respond using a tick (√) where the response matches your opinion on, the extent to

Financial innovation affects the performance of the SACCO.

	Not At All 1	Low Extent 2	Moderate Extent 3	Great Extent 4	Very Great Extent 5
SACCOs Net Income has improved over the years due to the adoption of financial innovation					
Total Deposits have improved over the years due to financial innovations					
SACCOs have advanced more cumulative loans due to process innovation					
SACCOs Total Assets have increased over the years due to financial Innovations					

Thank you for your time.

APPENDIX III: Record Survey Sheet

Information from the SACCOs' audited financial statements will be used to fill out the record survey sheet.

	2015	2016	2017	2018	2019
Total Income					
Total Expenditure					
Total Assets					
Total Loans					
Return on Assets					

APPENDIX IV: List of Registered SACCOs In Meru County

No.	NAME OF THE SACCO
1	Capital Sacco Society Ltd
2	Centenary Sacco Society Ltd
3	Chai Sacco Society Ltd
4	Dhabiti Sacco Society Ltd
5	Golden Pillar Sacco Society Ltd
6	Kenya Police Sacco Society Ltd
7	MMH Sacco Society Ltd
8	Mwalimu National Sacco Society
9	Nexus Sacco Society Ltd
10	Nyambene Arimi Sacco Society Ltd
11	Siraji Sacco Society Ltd
12	Smart Champions Sacco Society Ltd
13	Solution Sacco Society Ltd
14	Southern Star Sacco Society Ltd
15	Times-U Sacco Society Ltd
16	Trans Nation Sacco Society Ltd
17	Unaitas Sacco Society Ltd
18	Yetu Sacco Society Ltd

Source: SASRA (2020)

APPENDIX V: Summary of Secondary Data

YEAR 2015				
SACCO	**TOTAL ASSET**	**TOTAL DEPOSITS**	**TOTAL LOAN**	**NET INCOME**
Capital Sacco Society Ltd	0.97	1.98	0.63	0.03
Centenary Sacco Society Ltd	0.49	0.26	0.08	0.00
Chai Sacco Society Ltd	2.09	1.52	1.62	0.05
Dhabiti Sacco Society Ltd	0.31	0.28	0.22	0.00
Golden Pillar Sacco Society Ltd	0.29	0.15	0.23	0.02
Kenya Police Sacco Society Ltd	14.98	11.81	9.76	0.26
MMH Sacco Society Ltd	0.43	0.16	0.35	0.01
Mwalimu National Sacco Society Ltd	29.11	22.69	24.10	0.27
Nexus Sacco Society Ltd	0.07	0.03	0.06	0.03
Nyambene Arimi Sacco Society Ltd	0.19	0.11	0.14	0.01
Siraji Sacco Society Ltd	0.32	0.18	0.29	0.05
Smart Champions Sacco Society Ltd	0.25	0.08	0.25	0.04
Solution Sacco Society Ltd	3.98	2.06	3.21	0.17
Southern Star Sacco Society Ltd	1.01	0.65	0.81	0.02

Times-U Sacco Society Ltd	0.65	0.28	0.52	0.05
Trans Nation Sacco Society Ltd	1.37	0.85	0.98	0.07
Unaitas Sacco Society Ltd	12.97	6.19	1.09	0.54
Yetu Sacco Society Ltd	3.19	1.29	2.46	0.03
YEAR 2016				
SACCO	**TOTAL ASSET**	**TOTAL DEPOSITS**	**TOTAL LOAN**	**NET INCOME**
Capital Sacco Society Ltd	1.08	2.30	0.89	0.06
Centenary Sacco Society Ltd	0.61	0.40	0.10	0.02
Chai Sacco Society Ltd	2.43	1.70	1.94	0.04
Dhabiti Sacco Society Ltd	0.36	0.30	0.23	0.02
Golden Pillar Sacco Society Ltd	0.31	0.19	0.22	0.03
Kenya Police Sacco Society Ltd	17.62	13.66	13.11	0.44
MMH Sacco Society Ltd	0.44	0.22	0.34	0.03
Mwalimu National Sacco Society Ltd	32.01	25.78	28.01	0.34
Nexus Sacco Society Ltd	0.08	0.05	0.07	0.01
Nyambene Arimi Sacco Society Ltd	0.19	0.13	0.16	0.02

Siraji Sacco Society Ltd	0.33	0.21	0.28	0.04
Smart Champions Sacco Society Ltd	0.27	0.10	0.26	0.01
Solution Sacco Society Ltd	4.09	2.43	3.19	0.28
Southern Star Sacco Society Ltd	1.02	0.70	0.71	0.13
Times-U Sacco Society Ltd	0.69	0.32	0.51	0.03
Trans Nation Sacco Society Ltd	1.46	0.90	1.10	0.15
Unaitas Sacco Society Ltd	13.67	6.76	1.04	1.27
Yetu Sacco Society Ltd	3.31	1.51	2.43	0.02
YEAR 2017				
SACCO	**TOTAL ASSET**	**TOTAL DEPOSITS**	**TOTAL LOAN**	**NET INCOME**
Capital Sacco Society Ltd	2.09	2.45	1.78	0.12
Centenary Sacco Society Ltd	0.77	0.40	0.19	0.03
Chai Sacco Society Ltd	2.65	2.18	2.01	0.11
Dhabiti Sacco Society Ltd	0.48	0.34	0.31	0.02
Golden Pillar Sacco Society Ltd	0.34	0.23	0.26	0.04
Kenya Police Sacco Society Ltd	24.12	16.07	18.91	1.49

MMH Sacco Society Ltd	0.57	0.27	0.47	0.07
Mwalimu National Sacco Society Ltd	40.51	28.96	34.36	0.43
Nexus Sacco Society Ltd	0.09	0.06	0.07	0.01
Nyambene Arimi Sacco Society Ltd	0.21	0.16	0.18	0.02
Siraji Sacco Society Ltd	0.37	0.24	0.30	0.06
Smart Champions Sacco Society Ltd	0.29	0.12	0.27	0.02
Solution Sacco Society Ltd	4.97	2.59	3.76	0.32
Southern Star Sacco Society Ltd	1.09	0.75	0.76	0.12
Times-U Sacco Society Ltd	0.76	0.40	0.56	0.04
Trans Nation Sacco Society Ltd	1.48	2.47	0.92	0.09
Unaitas Sacco Society Ltd	13.98	7.12	10.19	0.63
Yetu Sacco Society Ltd	3.49	1.82	2.59	0.15
YEAR 2018				
SACCO	**TOTAL ASSET**	**TOTAL DEPOSITS**	**TOTAL LOAN**	**NET INCOME**
Capital Sacco Society Ltd	2.33	2.77	1.81	0.19
Centenary Sacco Society Ltd	0.89	0.70	0.23	0.06

Chai Sacco Society Ltd	3.01	2.46	2.67	0.28
Dhabiti Sacco Society Ltd	0.54	0.36	0.33	0.06
Golden Pillar Sacco Society Ltd	0.41	0.27	0.30	0.04
Kenya Police Sacco Society Ltd	26.17	18.77	20.39	1.73
MMH Sacco Society Ltd	0.61	0.33	0.53	0.11
Mwalimu National Sacco Society Ltd	45.16	32.83	31.18	0.94
Nexus Sacco Society Ltd	0.10	0.07	0.08	0.01
Nyambene Arimi Sacco Society Ltd	0.22	0.15	0.19	0.03
Siraji Sacco Society Ltd	0.41	0.27	0.32	0.06
Smart Champions Sacco Society Ltd	0.29	0.14	0.27	0.04
Solution Sacco Society Ltd	5.01	2.96	3.91	0.64
Southern Star Sacco Society Ltd	1.16	0.80	0.86	0.10
Times-U Sacco Society Ltd	0.75	0.48	0.59	0.07
Trans Nation Sacco Society Ltd	1.51	0.90	0.90	0.12
Unaitas Sacco Society Ltd	14.01	7.48	11.12	0.67
Yetu Sacco Society Ltd	3.62	2.13	2.62	0.26

YEAR 2019				
SACCO	**TOTAL ASSET**	**TOTAL DEPOSITS**	**TOTAL LOAN**	**NET INCOME**
Capital Sacco Society Ltd	3.67	3.67	3.15	0.25
Centenary Sacco Society Ltd	1.09	1.09	0.41	0.08
Chai Sacco Society Ltd	3.67	2.61	3.15	0.30
Dhabiti Sacco Society Ltd	0.62	0.40	0.43	0.03
Golden Pillar Sacco Society Ltd	0.43	0.27	0.32	0.05
Kenya Police Sacco Society Ltd	34.82	21.55	29.31	2.60
MMH Sacco Society Ltd	0.65	0.38	0.52	0.07
Mwalimu National Sacco Society Ltd	52.03	36.90	33.73	0.65
Nexus Sacco Society Ltd	0.11	0.08	0.09	0.01
Nyambene Arimi Sacco Society Ltd	0.25	0.14	0.20	0.04
Siraji Sacco Society Ltd	0.45	0.31	0.32	0.07
Smart Champions Sacco Society Ltd	0.30	0.17	0.27	0.04
Solution Sacco Society Ltd	5.22	3.49	4.03	0.60
Southern Star Sacco Society Ltd	1.19	0.84	0.87	0.15
Times-U Sacco Society Ltd	0.76	0.53	0.63	0.15

Trans Nation Sacco Society Ltd	5.11	3.75	0.91	0.16
Unaitas Sacco Society Ltd	14.23	8.05	11.45	0.46
Yetu Sacco Society Ltd	3.70	2.35	2.70	0.46

APPENDIX VI: Publication

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Effects of Process and Product Innovation on Performance of Savings and Credit Co-Operative Societies in Meru County, Kenya

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Abstract:
Background*: Innovation is not all about the commercialization of ideas and inventions as one sometimes finds that things described as innovations involve no impact, little or no novelty but rather a few changes in the use or application of the innovation. This study aimed at exploring the area with the hope of providing important answers on the effect of process and product innovation and performance of Savings and Credit Co-operative Societies (SACCOs) in Meru County. The study was guided by the following objectives: To determine the effect of process innovation and performance of SACCOs in Meru County and to establish how product innovation has an effect on performance; The study was anchored on Schumpeter's innovation theory and Task Technology fit theory. The study adopted a descriptive and inferential research design; the target population of 162 respondents was drawn from the 18 SACCOs registered and licensed by Sacco Society Regulatory Authority (SASRA) and of staff from the marketing department, credit, accounting, customer service and management. The population was divided into strata and random samples were taken from each stratum to ensure adequate representation of all classes of employees which also reduced the probability of respondent biases. Questionnaires were administered to the sampled respondents and statistical analysis were conducted using a statistical package for social sciences (SPSS) to calculate descriptive statistics, analysis and regression. The Model summary of the regression analysis showed that all the independent variables accounted for 48.9% of the variance of Sacco's performance. Process and Product innovation had a positive correlation with the performance of SACCOs in Meru County. It was recommended that apart from SACCOs exploiting the opportunities presented by digitalization either by leveraging the technologies in-house or in partnership with FinTech companies, they also need to effectively govern and measure their new innovation development processes from idea development to innovation execution. These should be done while keeping consumer needs and preferences in mind, when employing innovation technologies so as to gain competitive advantage.*

Key Words; Financial Innovation; Financial Technology; Deposit Taking Saccos;

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I. Introduction

Universally, SACCOs are an independent group of persons united voluntarily to satisfy their common economic, social, cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise (SASRA 2017). SACCOs in Kenya are classified as either Deposit-taking or non-deposit taking (DT-SACCOs) where both categories mobilize savings from member's deposits which are collateralized for purposes of advancing loans to its members. However, Non-Deposit Taking SACCOs receive deposits from members in the form of share capital and these amounts are refundable to members only when they intend to leave the SACCO. This undertaking is termed as either FOSA (Front Office Service Activity) while the previous is known as BOSA (Back Office Service Activity). SACCOs offer the low-income earners the financial inclusion needed to stimulate socio-economic growth which is counted as one of the economic pillars of the country, these diverse settings of SACCOs from different financial backgrounds and geographical regions encourage distributed development (Ndung'u, 2010).

Despite the wide coverage within the country compared to other financial institutions SACCOs are still struggling and have been losing their market share attributed to the fast technological changes and business rivalry within the financial environment (Nyaga, 2012). Innovation has greatly affected the financial market. It has kicked off extensive opportunities for the stakeholders and has further opened up and increased new markets which have come about as a result of new products and services. Financial innovations involve firms developing new things or new-age strategies to improve their operations. In money related organizations or industries, Innovation is viewed as the show of advancing new budgetary instruments, facilitating straightforward access to

monetary activities such as payouts, refunds, settlements, deposits, withdrawals, and money transfers, therefore, reducing chances for oversights and inaccuracies (Mugane, 2015). Innovation is therefore not just creating something new from beginning to the end, but the ability to swiftly embrace external changes and build innovations that help the organizations to be at a competitive advantage (Carayannis, Samara, & Bakouros, 2015).

The Kenyan financial sector has also faced tremendous dynamism over time. A lot of changes have been adopted in the area and prompted an expansion of money related items, applications and hierarchical structures that have improved and expanded the productivity of the monetary framework (Gorton and Metrick, 2010). Therefore, for SACCOs to survive these turbulences they must adapt to these new approaches by adapting to financial innovations in the market to foster growth, prosperity, existence and transformations as the environment within and outside the organization changes (Ngure, Kimani & Kariuki, 2017).

Statement of the Problem

SACCOs operate in a competitive environment where they are at a disadvantage due to their lack of sustainable financial innovation foundation (Tsuma, Maniangi, Odhiambo, & Musinga, 2015) this situation has been heightened by an increase of financial institutions in the market that are highly sophisticated in regards to new payment systems and asset options (Blythin & Cooten, 2017). The new entrants in the market are marked by the mobile digital credit revolution in Kenya which have attracted many financial technology (FINTECH) companies driving financial inclusion outside the traditional forms of banking or financial uses (Worldbank,2018). These firms offer various technologies that meet individual needs and give opportunities to Kenyans who were financially excluded to access financial services, however, there are no control measures put in place in terms of policies, allowing organizations to offer easy services to unskilled customers (Broom, 2013). As a result of these new entrants, and competition from other financial institutions, SACCO's productivity has gradually declined and a majority of them cannot compete effectively thus calling for creative and innovative ways of achieving sustainability (Makori, 2013).

Ringera (2018) did a study on the effects of financial innovation on the efficiency of SACCOs in Meru County and established that there was a weak positive but statistically significant relationship between Mobile banking and SACCO's efficiency as well as between Internet banking and SACCO's efficiency. Ndwiga and Maina (2018) ascertained that process innovation had a significant and positive relationship with financial performance while product innovation had an insignificant relationship. There was no consensus between theoretical and empirical findings since some were positive, negative, significant or non-significant.

From the review of relevant literature, it is evident that research in the area of SACCO innovations has been done locally but it remains largely unclear whether SACCOs in Meru County are adequately innovative in running their businesses given that they are faced by the challenge of limited growth and expansion. This is underscored by the fact that only 18 SACCOs are hitherto registered and licensed to operate by SASRA in 2020 as opposed to a total of 182 operating SACCOs registered at the Meru County Co-operative office. It is against this background that this paper examined the effect of process and product innovations on performance of SACCOs in Meru County, Kenya.

Study Objectives

i. To determine the effect of process innovations and performance of SACCOs in Meru County.
ii. To establish the effect of product innovations and performance of SACCOs in Meru County.

Research Hypotheses

i. **H_{01}**: There is no significant relationship between process innovations and the performance of SACCOs in Meru County.
ii. **H_{02}**: There is no significant relationship between product innovations and the performance of SACCOs in Meru County.

II. Empirical and Theoretical Review

Theoretical Review

Schumpeter's Theory of Innovation.

The theory of Innovation was pioneered by Schumpeter (1928) he explains how organizations can become autonomous inventors and create opportunities for new profits through Innovation. He believed that an entrepreneur could earn economic profits by introducing successful innovations and the rewards come in form of profits given for his performance. According to Schumpeter, innovation would be any new policy that an entrepreneur undertakes to reduce the overall cost of production or increase the demand for his products.

The innovation theory hypothesizes that SACCOs can gain profit if the innovations undertaken can reduce the overall cost of production or increase the demand for their products but the profits earned are for a short

duration as competitors imitate the innovation, thereby the innovation ceases being new or novice. However, Schumpeter argued that innovation can also come as a result of demand from businesses to acquire methods to preserve and increase their capital and revenues and SACCOs can achieve this by employing cost accountants and research and development departments to analyze changes in market trends. This theory is very important to the study because SACCOs ought to be competitive in the ever-changing financial institution dynamics so as not to be extinct from the industry therefore continuous innovation is vital for them for survival..

Task Technology Fit Theory

Goodhue & Thompson (1995) pioneered the task-technology fit (TTF) theory. They resolved task-technology fit (TTF) as a technology that assists an individual in performing his or her tasks specifically, being fit among task requirements, individual abilities, functionality and interface of the technology. The task-technology fit model is categorized into four major constructs, Technology Characteristics, Task Characteristics and Task-Technology Fit which later influences the outcome variable of usage and individual or company performance. TTF models hypothesize that Information Technology (IT) will be utilized if, and only if, the IT function is appropriate to the user tasks. Therefore, for an information system to positively impact an individual's performance; the technology utilized should be a good fit with the tasks the technology supports (Muthui, 2013).

The operational efficiency of SACCOs is associated with diverse aspects such as operational cost-effectiveness, profitability, customer service. These technological advances embodied in process innovation improve productive efficiency by reducing average total costs (Therrien et al 2011) Therefore, the Information systems modeled should be able to assist users to carry out tasks more efficiently and competently. The model was used to explain why SACCOs need to embrace technology in their daily operations to cut on cost, improve on their process delivery to serve customers effectively and sufficiently aim at attaining efficiency and increasing their customer base. Nevertheless, information systems will not only add value but also improve performance (Wyman, 2012).

Empirical Literature

Moki, et al. (2019) carried out a study on financial innovation strategy and financial performance of DT-SACCOs in Nairobi County. Open system, financial intermediation, life cycle saving theories were used in the study. Descriptive research design and causal research design were used in the study where the target population consisted of forty registered DT-SACCOs in Nairobi County. The study established that there was a significant relationship between financial innovation and financial performance. Firms that did not implement financial innovation licenses were to be revoked due to their financial unsustainability. However, the study failed to mention those who responded to the questionnaires issued

Ouma, Omagwa and Ngaba (2018) carried out a study on the effect of financial innovation on the performance of Deposit Taking SACCOs (DTS) in Nairobi County, Kenya. The authors claimed that to handle new technologies then SACCO's in Kenya need to reserve huge investments for innovations and training of manpower it is however not clear if the adoption of financial innovations has had any major effect on DTS financial performance. The study established that new products and service processes had a considerable effect on the financial performance while liquidity and profitability were insignificantly affected by the formation of new organizations but significantly affected by capital adequacy. It was also established that the relationship between financial innovation and performance was significantly affected by a firm's characteristics.

Ngure (2017) carried out a study on financial innovations and the performance of savings and credit co-operatives societies in Kirinyaga County, Kenya. He applied a cross-sectional descriptive survey research design and used self-administered questionnaires for primary data while audited financial statements were used to obtain secondary data. The results showed a positive relationship between financial innovations and the financial performance of SACCOs in Kirinyaga County. The investigated innovations included product innovations, process innovations and institutional innovations. It is however not clear whether these financial innovations have a similar influence on SACCOs in Meru County.

Shejero (2016) sought to ascertain the effect of innovation strategies on competitive advantage among savings and credit cooperative societies in Mombasa County, Kenya. Primary data was collected using a semi-structured questionnaire. The study suggested the need to improve cost-saving initiatives and extend product range among the main issues influencing the adoption of innovation as a strategy for achieving competitive advantage. The findings revealed that the costs associated with innovation are too high and that product innovation is what is mostly used by SACCOs in Mombasa County.

Njenga, Kiragu and Opiyo (2015) conducted a study on the influence of financial innovations on the financial performance of SACCOs in Nyeri County Kenya. 30 SACCOs were reviewed and a cross-sectional survey research design and stratified sampling technique were used. On data collection, a semi-structured questionnaire was employed and descriptive statistics were generated to describe the study objectives and the profile of respondents. Measures of variations were used to establish convergence of the responses. Inferential

statistics, including, model fitness (R^2), for testing the null hypothesis, ANOVA and regression coefficients were used where a significant relationship between financial innovations and financial performance was concluded. Additionally, telephone banking and internet banking were found to be the key drivers of the financial performance of SACCOs.

Conceptual Framework

A conceptual framework is a diagrammatic framework that shows the relationship between dependent and independent variables.

Figure 2.1 shows the variables used in the study.

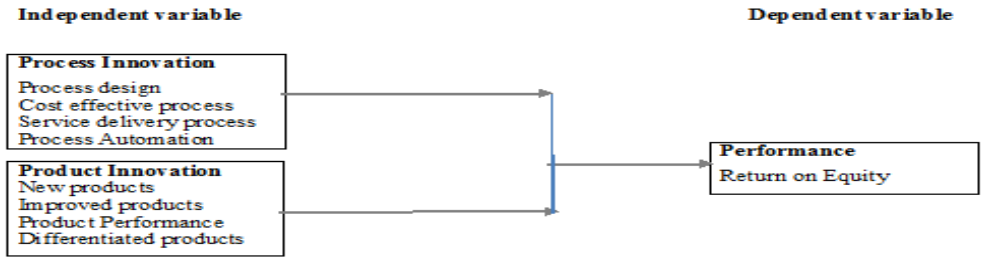

Figure 2.1 Conceptual Framework for process and product innovation on Performance of SACCOs in Meru County, Kenya.

III. Methodology

Research Design

The study used a descriptive research design. This design applied to the study since it enabled the researcher to gather data of the variable of the study in their natural setting and allowed valid general conclusions from the facts discovered. The rationale for choosing this design was based on its ability to explain association amongst variables in their natural setting and allowing a general conclusion through the administration of self-completed questionnaires (Orodho, 2002).

Target Population

A population entails a collection of items to be investigated (Mugenda, 2005). The study's population comprises all the registered SACCOs that are operational in Meru. The target population was drawn from the Marketing department, Tellers, credit department, Management and customer care.

Table 1: Target Population

Department	No of staff targeted	No of SACCOs	Total Population
Marketing Dept.	2	18	**36**
Accounts Dept.	3	18	**54**
Credit Dept.	2	**18**	**36**
Management	1	18	**18**
Customer Care	1	**18**	**18**
Total			**162**

Sampling Procedure and Sample Size

According to Kothari (2004) where a study population exceeds 100 should be sampled and since the study had a large population (162) stratified sampling technique was employed. Stratified random sampling technique was justified for use in this study as per the scientific rules of probability; it ensured adequate representation of all classes of employees and reduced the probability of respondent bias. Nevertheless, since Meru has only 18 registered SACCOs with a different number of employees this sampling method ensured proportionate participation of employees from all the SACCOs. The use of 66 respondents in the study was befitting in line with the recommendations of Mugenda and Mugenda (2003) whereby a descriptive study should include a population of at least 30%. The below formula was employed to determine the size of the sample as used by Nassiuma (2008).

$$N=\frac{NC^2}{C^2+(N-1)e^2}$$

Where:
n represents sample size,
N represents the study population
C represents coefficient of variation ($21\% \leq C \leq 30\%$), and
e represents error margin ($2\% \leq e \leq 5\%$).
Calculating the sample size,

$$n = \frac{162(0.21)^2}{0.21^2+(162-1)0.02^2}$$

n = 65.85
n = 66 respondents

Research Instrument

The study used primary data collected by the use of a self-administered structured questionnaire through the "drop and pick technique. A questionnaire is a research instrument consisting of a series of questions and other prompts to gather information from respondents (Mugenda & Mugenda, 2003). The questionnaires consisted of structured questionnaires and consisted of closed-ended questions and included a Likert scale of 5 points. Secondary data was obtained from annual reports published, magazines and other available literature including a statement of financial position and directors reports.

Data Collection Procedure

Data collection deals specifically with the category and type of data to be collected and the techniques used. The type of data collected for this study was primary and secondary data which was used to analyze the effects of process and product innovation on performance of SACCOs in Meru County. Primary data was collected by the use of a self-administered questionnaire to gather the required data. This was followed by requests for approval from the management of the afore-stated firms. The questionnaires were then distributed to the sampled respondents through their managers. Secondary data was obtained from SASRA records of financial statements of the SACCOs. Specifically, Return on Equity (ROE) was obtained from the financial statements of SACCOs for the years 2015 to 2019 to measure their financial performance.

Methods of Data Analysis

Mugenda (2005) defines data analysis as the process that brings order and meaning to the information collected. Secondary data was collected, coded and tabulated according to each dependent and independent variable and analyzed using descriptive statistics in terms of the mean values.
The following regression model guided the study.

$$\mathbf{Y= \beta 0 + \beta 1 X_1 + \beta 2 X_2 + \beta 3 X_3 + \varepsilon}$$

Where:
Y is Performance (ROE)
β0 is Constant
X_1= % of Process Innovation
X_2= % of Product Innovation
a= The constant of regression
e= The error term.
β1, β2, β3 are Regression coefficients of Independent variables.

IV. Findings

Descriptive information on Process Innovation

The respondents were asked to indicate their level of agreement on the effect of process innovation on the performance of SACCOs in Meru County. The findings mean are indicated as shown in Table 2

Table 2: Process Innovation and Performance

Process Innovation Statements:	N	Min	Max	Mean	StdDev.
Process innovation designs have improved employees effectiveness and productivity.	54	1	5	4.056	0.834
Process innovation has reduced the cost of operation and enhanced efficiency in service delivery.	54	1	5	3.852	0.96
Process innovation techniques have improved service quality leading to customer satisfaction and customer retention.	54	1	5	4.074	0.929

Automation of the SACCO systems has improved our market share and profitability.	54	1	5	3.426	0.983

According to the findings, the respondents indicated they strongly agreed (Mean = 4.056) with the statement that Process innovation designs have improved employees effectiveness and productivity. Respondents also agreed that process innovation has reduced the cost of operations (Mean = 3.852) enhancing efficiency in service delivery. The study findings further indicated process innovation techniques used by the SACCOs with a (Mean = 4.074) had improved service delivery leading to customer satisfaction and retention. Additionally, respondents concurred (Mean = 3.426) that automation of the SACCO systems improved their market share and profitability.

Descriptive information on Product Innovation

The respondents were asked to indicate their level of agreement on the effect of product innovation and performance of SACCOs in Meru County. The findings are indicated shown in Table 3

Table 3: Product Innovation and performance

Product Innovation Statements	N	Min	Max	Mean	Std Dev.
The introduction of new products has attracted more members to the SACCO.	**54**	**1**	**5**	**4.037**	**0.889**
SACCO products are improved regularly to match customers' needs and expectations of diverse social classes.	54	1	5	3.074	1.043
SACCO's products are simple to understand and well customized to deliver a long-term competitive advantage.	54	1	5	4.259	0.757
Our products are distinctively differentiated and informed by the unique characteristics of clients from different market segments.	54	1	5	3.056	1.14

The mean score for the statement "Introduction of new products has attracted more members to the SACCO" had a fairly high mean (Mean = 4.037). The statement "SACCO products are improved regularly to match customers' needs and expectations of diverse social classes" had mean (Mean = 3.074). The statement "SACCO's products are simple to understand and well customized to deliver long-term competitive advantage" had the highest mean (Mean = 4.259). The statement "Our products are distinctively differentiated informed by the unique characteristics of clients from different market segments" had the lowest mean (Mean = 3.056).

Descriptive information on Institution Innovation

The respondents were asked to indicate their level of agreement on the effect of Institution innovation on the performance of SACCOs in Meru County. The findings are indicated as shown in Table 4.

Table 4: Descriptive Statistic Return on Equity

	2015	2016	2017	2018	2019	Mean	Std Dev
Total Assets (Kshs. Billions)	75.23	82.38	129.04	168.6	128.3	6.48	12.02
Total Deposits (Kshs. Billions)	50.57	57.66	66.75	73.87	85.86	3.72	7.5
Gross Loans (Kshs. Billions)	51.55	58.52	94.8	81.02	96.68	4.25	7.85
Total Income(kshs Billions)	2.76	4.63	14.76	11.04	19.14	0.58	1.15
Total Equity (Kshs Billions)	3.18	3.45	3.77	1.93	4.06	0.18	0.82
ROE	0.12	0.19	0.43	0.13	0.61	0.02	0.22

Total assets had the highest mean for the period 2015-2019 (Mean= 6.48) while total Equity had the lowest (mean= 0.18). 2018 had the highest Total assets of (168.60) an indicator of the efficiency of the SACCOs in using its assets to generate revenue while 2015 had the lowest total assets. Total deposits in 2019 were the highest (85.86) while 2015 had the lowest total deposits of (50.57). This concurs with study findings done by Musasiah (2010) that deposit level positively impacted lending and the growth of SACCOs in Nairobi County. Gross loans were at the highest in 2019 (96.68) while 2015 had the lowest gross loan (51.55) in the study period. 2015 showed the lowest ROE of 0.12 and 2019 showed the highest 0.61 over the study period. This study

reveals that the performance of SACCOs was fluctuating in the last 5 years of the study as shown in table 4.13 as ROE for 2016 (0.19) 2017 (0.43) and 2018 decreased to (0.13) the level of performance of SACCOs is not stable a fact that can be attributed to other selected factors in the study.

Correlation Analysis

This study adopted a correlation analysis to establish statistical relations between two or more variables such that systematic changes in the value of one variable are accompanied by systematic changes in the other variable. Hypothesis testing was subjected to statistical analysis as shown below. Pearson's correlation analysis and multiple regression analysis were used to test the study hypotheses.

H_{o1}: There is no significant relationship between process innovations and the performance of SACCOs in Meru County.

Correlation between Process Innovations and Performance of SACCOs was conducted to establish the linear relationship between the independent variables and the dependent variable.

Table 5: Process Innovation and ROE

		Performance
Process Innovation	Pearson Correlation	0.222
	Sig 2 tailed	0.107
	N	54

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

The results of correlation analysis showed that the correlation between process innovation and performance is positive but not statistically significant ($r=0.222$, $p>0.05$). The study accepts the null hypothesis that there is no significant relationship between process innovation and the performance of SACCOs in Meru County. This points out that any effort to change the process design, the cost of adopting ICT service delivery, new process innovation techniques and automation of SACCOs will have an upsurge in performance. These findings concur with a study by Gichana (2015) which found that process innovation had a positive effect on the financial performance of a firm.

Ho_2: There is no significant relationship between product innovations and the performance of SACCOs in Meru County.

Correlation between Product Innovations and Performance SACCOs was conducted to establish the linear relationship between the independent variables and the dependent variable.

Table 6: Product Innovation and ROE

		Performance
Product Innovation	Pearson Correlation	0.460
	Sig 2 tailed	0.000
	N	54

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

The study showed that the relationship between product innovation and ROE was positive and statistically significant ($r=0.460$, $p<0.05$). The study, therefore, rejects the null hypothesis that there is no significant relationship between product innovation and the performance of SACCOS in Meru County. This implies that an increase in the introduction of new products, improving on current products, enhancing the product performance and having differentiated products will enhance the performance of SACCOs in Meru County. These findings support those of Mosongo (2013), Githakwa (2011) and Tabas et al., (2012) and agree with Sidek (2013) who observed that product innovation indeed significantly influences firm performance.

Regression Analysis for Overall Model

The study sought to determine the nature of the relationship, which are the strength and the direction of the relationship that exists between the study variables.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimation
	0.489[a]	0.239	0.209	0.368

The study evaluated the effect of financial innovation under study (process & product innovation) and performance (ROE) of SACCOs in Meru County. Using multiple regression analysis the combined effect of the process, product and institution innovation and performance of SACCOs was established. The results showed that R^2 equals 0.239 which means that 23.9% of the variance of Y is explained by X. Adjusted R square equals 0.209 and Multiple correlation (R) equals 0.489 It means that there is a moderate direct relationship between predicted data and the observed data,

Analysis of Variance

The probability value (p-value) of a statistical hypothesis test was done to find a value of the test statistic as either extreme or more than extreme than that observed by chance alone, which was to check whether the null hypothesis H_0 was true. The p-value was compared with the actual significance level of the test and if it was smaller the result was significant. The smaller it is the more convincing is the rejection of the null hypothesis.

Table 8: ANOVA[b]

Model	DF	Sum of Squares	Mean Square	F	Sig.
Regression	2	6.534	3.26	7.571	0.000
Residual	51	22.007	0.431		
Total	53	28.541			

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

The findings on the analysis of variance (ANOVA) indicated right-tailed F ($_{1, 51}$) =7.571, p=0.000462. Since p-value < 0.05, we reject the H_0. The linear regression model, $Y=b_0+b_1x_1+\ldots+b_2X_2$ provides a better fit than the model without the independent variables resulting in, $Y=b_0$s.

These findings implied that the results are statistically significant and show that there was a significant effect on financial innovation (process and Product) and the performance of SACCOs in Meru County.

Regression Coefficients

The regression equation was explained by the following regression coefficients.

Table 9: Regression Coefficient

Model	Unstandardized Coefficient		Standardized Coefficient			
	B	Std Error	Beta	t	Sig	VIF
Constant	-2.006	0.838	0	-2.393	0.02	
Process Innovation	0.176	0.165	0.133	1.064	0.292	1.041
Product Innovation	0.657	0.189	0.433	3.456	0.001	1.041

The findings showed that the coefficient and P values for the variables in the study. The results showed that product innovation ($p < 0.05$) and process innovation ($p>0.05$). There are no multicollinearity concerns (Intercorrelations among the predictors X_1,X_2) as all the VIF values are smaller than 2.5.

The interpretations of the findings indicated the following regression model.

$$\mathbf{Y= -\beta 0 + \beta 1X_1 + \beta 2X_2 + \beta 3X_3 + e}$$

Therefore,

$$\mathbf{Y= -2.006+0.176x_1+0.657x_2}$$

Where

Constant = -0.2006, X_1= 0.176 shows a unit change in process Innovation results in a .175 unit increase in financial performance; X_2= 0.657 shows that a unit change in product Innovation results in a 0.656 unit increase in financial performance.

V. Conclusion

The study makes the below conclusions based on the results in line with research objectives and hypotheses. The first hypothesis showed that new process innovation techniques had a positive effect on the performance of SACCOs in Meru County which is supported by other empirical studies. This means that innovation by design determines how the end-user will experience, interact with and generally respond to what's on offer. Additionally, the innovation techniques used have improved service delivery, customer retention as well increased profitability and market share of the SACCOs. The study indicates that SACCOs need to offer solutions and create value by giving good and exemplary services. It is noted that services are very particular due to their specific characteristics of intangibility, simultaneity and heterogeneity. Therefore, processes need to be improved to enhance customer service and loyalty. Research has proven that higher retention results in higher market share, which in turn results in higher revenues. Numerous studies have confirmed this assertion (Ndubisi, 2003; Rosenberg & Czepiel, 1983) have shown that the cost of serving one loyal customer is five to six times less than the cost of attracting and serving one new customer.

In regards to the test of the second hypothesis, the success of any innovation depends on how good the products are, to begin with, the appropriate use of the product, the value of an innovation used and the competence of the person implementing it. Therefore, according to the findings, introduction of new products had a positive effect on the performance of SACCOs in Meru County, which also concurred with other empirical studies. The study thus concludes that product innovation is all about the development of products that are attractive to the market audience, targets a profitable customer segment and addresses the right unmet needs. SACCOs need to adapt to customers' needs, provide quality standardized products that are innovative and environmentally friendly. The study demonstrates that product innovation is a difficult process driven by advancing technologies, changing customer needs, shortening product life cycles, and increasing global competition.

V. Recommendations

Having a sound innovation management plan is not enough since it must translate into viable products and positive business results. To improve returns on innovation investments, SACCOs need to effectively govern and measure their new innovation development processes from end to end, from strategic road mapping to idea development to innovation execution. The study recommends that SACCOS need to analyze their environment and employ innovative technologies to help them gain a competitive advantage in their highly competitive environment. This can be done by exploiting the opportunities presented by digitalization by either leveraging the technologies in-house or partnering with FinTech companies. These techniques would increase the use of technology to have a continuous and aggressive focus on digitization and adoption of new and emerging technologies to bring in operational efficiencies, enhance speed-to-market and deliver superior customer experiences. The study also recommends that the government through SASRA and the Ministry of Industry and Co-operative development continue to provide a conducive environment to allow SACCOs to innovate in order to thrive and flourish through beneficial legislation.

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